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KNOWLEDGE BY ACQUAINTANCE

EVER since Russell proposed the distinction between "knowledge by acquaintance" and "knowledge by description", there has been a good deal of discussion of these two ways of knowing. I feel, nevertheless, that the matter may profitably be reconsidered, especially because, so far as I am aware, there has been no adequate study of knowledge by acquaintance. This is true even of Russell himself, for the three early essays in the *Monist*, "On Acquaintance",[1] are in large measure a polemic against the neutral monism and radical empiricism of thirty years ago, and I doubt if he would now accept his own analysis as presented there, or if anyone still adheres to the positions attacked; while, in the essay entitled "Knowledge by Acquaintance and Knowledge by Description" reprinted in *Mysticism and Logic*, the main emphasis is on knowledge by description. In the present paper I shall limit myself almost entirely to a study of knowledge by acquaintance—its characteristics, problems and functions.

In the latter essay, where Russell first expounded the distinction between the two types of knowledge, he offers some meager, yet interesting observations on knowledge by acquaintance, which we may conveniently take as the starting point for our own reflections. Thus he writes, "I say that I am acquainted with an object when I have a direct cognitive relation to that object; *i.e.*, when I am directly aware of that object itself." And again, "I think the relation of subject and object which I call acquaintance is simply the converse of the relation of object and subject which constitutes presentation."[2] In these citations Russell has called attention to one ob-

[1] *The Monist* XXIV 1-16, 162-187, 434-453; 1914.
[2] *Mysticism and Logic* 209, 210.

viously necessary condition for knowledge by acquaintance, namely, the givenness of the object. Accordingly, most philosophers would agree that there can be no such knowledge by me of the concrete items in the mind of another person (although one might have it of the universals which are factors in those items); or of physical objects (except perhaps of their 'surfaces' and the 'forces' that, playing through the former, interact with me); or of past or future events (or at least of remoter past and future happenings), since, as they do not exist, they cannot be presented—memories and expectations of such occurrences can be given, but not the events themselves. On the other hand, it would be generally admitted that I may have knowledge by acquaintance of sense data and universals (in whatever sense they exist), of my own memories, expectations, volitions and concepts, since these may be presented; and finally, as I should hold, of the matrix self, because that is present in all the items mentioned.[3]

However, although a necessary, presence is not a sufficient condition of knowledge by acquaintance. The mere presence of sounds, colors, perfumes, desires, and the like, does not entail that they are known. The supposition that it does arises, in part, from the belief that they may have a separate existence of their own, apart from the mind, and that presence is a new relation, presumably cognitive, into which they may happen to enter. But, to state the matter in a such a way as to involve a minimum of controversial assumptions, there is no evidence that this belief is true. So far as we know, the presence of a sensum or an activity such as a desire or judgment, is nothing besides its existence, along with other such items, in the organization which I call myself, or within the one which you call yourself; and to say of such an item that it is not present, is equivalent to saying either that there is none such, or that it belongs to your self, but not to mine. If, for example, you ask me, Do you hear a noise? and I answer, No; I mean that there is no such noise, or else that it exists in your mind, but not in mine; there is no third possibility. The along-with-ness, compresence, togetherness, of an item within a self, is, to be sure, a unique relation, although it has properties common to other relations, such

[3] In a subsequent paper I hope to offer a study of the problems and paradoxes connected with our knowledge of the self.

as symmetry, but this is not the occasion to go into them, some of which are fascinating to investigate, as to mention one, whether the relation is transitive. However, it is important for us to be clear that this relation is not cognitive, for if it were, a sound heard would know a perfume smelt by me, and *vice versa*, when they were compresent.

That presence, though necessary, is not sufficient for knowledge by acquaintance follows from the fact that knowledge is an affair of the concept. This fact is obscured by the use of the term 'awareness', in place of knowledge, as if awareness were a sort of knowledge different from judgment. But there is no such thing as the awareness of an item of experience, distinguishable from the direction either of interest or conception upon it; otherwise, it is the same as the item itself. Psychoanalysts have produced evidence for the presence both of desires and perceptual elements of which we are said not to be aware; if trustworthy, this can signify only that they exist within the self, but that there is no conceptual interpretation of, or interest taken in, them. In normal experience also it is well known that items may be present without our being 'aware' of them, as is the case in the ordinary perception of common sense objects, when sensuous patterns of color and shape are present and serve as symbols by means of which the objects are said to be 'perceived', an oval shape of color meaning a round table top, without our being aware of it as such. We would become aware of it only if we applied some concept, such as 'oval', to it. The phenomenon is exactly like what occurs in reading: curious little black shapes also mean table, and we 'look through them' to the meaning beneath, without being cognizant of them, or when we are, we apply a concept, such as 'letter' to them. Indeed, what is called perception is a kind of reading, only instead of artificial, man-made letters and words, we read sensa, a natural and universal language. But this reading of sensa is not a knowledge of *them*, but of the physical objects meant by them, and, of course, is not knowledge by acquaintance, but by description, through the concepts 'table', 'chair', and the like.

The mere direction of interest upon a given item is awareness of it, if you please, but is not by itself a cognitional activity; it becomes so only when the application of a concept supervenes.

And, as a matter of fact, the two activities tend to appear together, for as soon as interest is aroused, it is accompanied by an effort at classification under some conceptual heading. If I become interested in a certain musical passage, I inevitably begin to conceptualize it in terms of some rhythmic or harmonic form; and, on the other hand, unless I have some categories by means of which I can judge it, it is difficult to maintain interest in it as such. Usually, however, what passes for an interest in a given item, is actually an interest in what it means, or may mean. If I am awakened at night by a noise, my interest is not so much in the noise as in what it may signify—burglar? cat?, etc., which needless to say, are not given, hence not known by acquaintance, but, if known at all, by description.

Knowledge by acquaintance consists, therefore, of the application of a concept to a present item; both the concept and the item are members of the same self. In the case of knowledge by description, on the other hand, the concept and what it denotes are not members of the same self; the object of the concept is absent. In both, the knowing is accomplished by the concept; and, I would add, is equally direct, in the sense that there is nothing that intervenes, as a medium or *tertium quid*, between the concept and what it knows—having the right concept *is* knowing. To be sure, knowledge by acquaintance is more direct in the sense that the evidence for the applicability of the concept is at hand in the very object itself, while in the mode of knowledge by description, it is gathered from sources extraneous to the object, that is to say, from its effects. In knowing my own feelings with regard to the state of world affairs, the evidence upon which I would apply the concept 'sad' to them consists of the feelings themselves, while if I know that your feelings are also sad, the evidence is clearly not your feelings themselves, but the word sounds that you produce in my mind, which are the effects of your intention to tell me how sad you feel. Yet it is not enough, in knowledge by acquaintance, that the concept and its object be together in one mind, for the concept must fit on to the object, as a glove fits a hand. This fitting of the concept on to the object, or of the object into the concept, is a unique primary experience, which however is well described by the metaphor which I have

employed. In knowledge by description, it is as if a glove were there, but the hand had slipped away. In the former, moreover, there is no difficulty in seeing how the concept performs its denotative or indexical function; for it denotes what it fits on to, taking hold of it as a glove holds a hand, while in the latter mode, how the concept picks out its object and means it, rather than some similar object, is a complicated and still largely unsolved problem.

However, against the view that even knowledge by acquaintance involves the application of a concept to the given, might be urged the contention of Russell[4] that whenever we use a concept in judgment we must be acquainted with it, which, if the view I am supporting is right, would entail that we should have to apply a concept to a concept, and a concept to that concept, and so on *ad infinitum*, which would reduce the theory to absurdity. At first glance Russell's contention would seem to be true, but I think its plausibility rests on an ambiguity in the term 'acquaintance' itself, which means, on the one hand, the kind of encounter, the face-to-face-ness which is presence, and, on the other hand, means knowledge, properly so-called. According to accepted usage, to be acquainted with a person means either to have 'contact' with him, or to know him, or, of course, both. Now then when I use a concept such as 'blue', I must indeed be acquainted with it in the sense that it is present, but its being present no more implies knowing it than the presence of sensa in perception implies knowing them, or wanting something, knowing my wanting. The concept is a thing that I use, not a thing that I necessarily know. I may, to be sure, know it, if I wish to; but in that case I must apply a concept to it—to know the concept 'blue', I must apply, say the concept 'concept' to it—I must recognize it as a concept. Judgment—the concept in use—is an activity, a doing; and there will always be a difference between knowing and doing, because the former is only a species of the latter. If it be objected still that I must obviously 'understand' the concepts I am using, and that understanding is knowledge, my answer would be that what is called 'understanding a concept' is the same as using one, not the same as knowing one. Similarly to understand a word is to

[4] *Mysticism and Logic* 219-221.

know how to use it, not to know its use, although knowledge of its use may supervene. A child understands many words, that is to say, knows how to use them, long before he knows their use—a knowledge which he acquires only when he goes to school and studies grammar and vocabulary.

The insight that knowledge by acquaintance is conceptual goes a long way towards meeting the objections of people like C. I. Lewis[5] to the recognition of this mode as knowledge at all; but does not go the whole way, for the objection remains unanswered, that a use of concepts to characterize the given is otiose. On the other hand, it seems incredible that such a use should not have a function in view of the wealth of concepts thus employed. Although most concepts denote and characterize transcendent objects, those that apply to the given are numerous—concepts of sensa like 'blue', 'green', 'loud', 'soft', 'hot', 'c♯', 'sweet', 'bitter', 'saturated', 'squarish'; concepts of value such as 'comfortable', 'painful', 'happy', 'dissatisfied'; concepts of immediate relationship, 'above', 'between', etc.

But the significance of knowledge by acquaintance can be understood only through the appreciation of the general functions of the concept, which presumably would be much the same in this mode of knowledge as in any other. These functions are three: one, to serve as what Whitehead has so finely called a lure for feeling (the aesthetic function); two, as a plan or guide for action (the pragmatic function); and three, as a substitute for and unifier of, primary experience (the cognitive function). These functions are obviously not unrelated, and the first two are clearly founded on the third. I wish to consider them briefly, so far as is necessary for our theme, beginning with the last.

That the concept does not function as a substitute for primary experience by being a copy of it, would I suppose be accepted by almost everyone today. The concept 'blue' is not itself blue; hence cannot copy any bluish experience; the concept 'round' is not itself round, hence cannot copy any roundish experience. Having rejected this naïve view of the concept one must find some other interpretation of it. This must proceed, I believe, upon the recog-

[5] C. I. Lewis, *Mind and the World Order*, Chapter V *passim*. The objections of the logical positivists to the effect that all knowledge must be 'public' will be considered in a forthcoming paper on knowledge by description.

nition that every concept has a base. The base is not usually a single item of primary experience; it is indeed rare that there are not alternative bases. Genetically, the base consists of experiences from which the concept has been derived. Thus the concept 'round' is based on experiences of the shape of wheels, rings and the like; the concept 'blue' is based on experiences of the sky, the surfaces of certain book covers, neckties, flags, and so forth. Now the concept always involves a readiness to return to experiences such as these or to invoke images of them. The concept is backward looking and dependent on memory. So then, when someone says "It is round", what he means is, "It is such as this", where 'this' is a memory, or something that he is seeing such as something that he might remember. But the concept is not merely backward looking; it is forward looking also; it is anticipation. Hence when you say, "It is round", I am ready to experience it as being *such as this,* such as my base; memory is turned forward into imagination, into expectation.

In the case of knowledge by description, one can easily see how the concept functions as a substitute for primary experience of the object which it describes, for it tells me what the object would be like if I could come into contact with it. In reading a book of travels, it is to me as if I were in the lands described. One can easily see also how the concept is a lure for feeling, since it carries with it the echoes of the emotional tones of its base (as do the concepts used in Gauguin's *Noa Noa*). Its pragmatic function is comprehensible too, for, even as expectation is memory turned forward, so a concept functions as a habit of action formed with reference to a base re-applied to the 'same' object, or adjusted to a new object similar to the base (My concept 'New York' based on many primary experiences, enables me to find my way about on re-visiting the city). And finally, there is no difficulty in seeing how the concept exercises a function of unification of experience, for it assimilates the absent object denoted to the base which is present or remembered. This account of the concept is, however, inadequate, since it neglects its creative side; there are concepts for which there are no integral bases, as 'Falstaff' or 'infinite series'; yet the elements of even such concepts, and the mode of their unification, have bases; hence they also have a base.

In the case of knowledge by acquaintance, on the other hand, the manner in which these functions are performed is not so clear. There is no need, one might hold, for the concept to act as a substitute for the object, since here is the object itself. And since presumably the object has its own lure, why concern ourselves with the charms of its echoes? Or of what use is a plan of action when we have here in the immediate what we desire; or if we want something different, the plan that would enable us to obtain it, would refer to the future, the transcendent, not to the present, the given. To these queries, I would answer as follows: With regard to the first, it is indeed true that in the mode of knowledge by acquaintance, the concept does not need to perform its substitutional function, but it does exercise its other cognitive function, that of unifier of primary experience. For, as has been seen, in the simplest use of the concept, namely, in recognition, the object recognized is assimilated to the base of the concept—the *this* is placed in a class with other *thises*. With regard now to the second function of the concept, to provide lures for feeling, I would call attention to the importance of recognition in aesthetic experience, stressed by Aristotle in a well-known passage of the *Poetics*. In order fully to appreciate the pattern of any work of art,—musical, pictorial or representational, one must recognize as of such and such a type the recurrence or balance of themes, or the appearance of elements of climax that come as fulfillments of intimations or expectations already provided. And in this process the lure of the given pattern is enriched with echoes of the lures of the bases of the concepts employed, lure added to lure, until there may emerge an experience that sums the values of a life.

Finally, the pragmatic function of the concept is not unrepresented in this mode of knowledge, although it enters, I believe, indirectly. This is the case in the useful arts, as may be shown by a simple illustration. Suppose I am a house painter consulting a customer about the desired color of his house. I show him a chart, from which he picks a color. I take the chart to the shop and begin mixing my paints, trying now this, now that combination, in an effort to match the chosen tint. At length I get what seems to be a match; that is to say, I recognize the tint that I experience from the paint as the same as the tint I experience from the selected

color on the chart. Now this is a case of pure knowledge by acquaintance, for what interests me at the moment is not color as a hypothetical attribute of physical pigments, but color as a visual quality of my experience. But although it is true that the judgment, "This color quality is the same as that", has in itself cognitive significance only; indirectly it has practical importance, for, having made the judgment, I shall proceed to paint the house from the mixture that yielded this tint rather than from any that yielded 'false' tints. The cook who tastes the soup in order to discover whether it has the 'right' flavor, and modifies the brew accordingly, makes a similar use of knowledge by acquaintance; and this procedure is typical whenever the production of instrumentalities for the creation of specified desirable qualities of experience is in question. Knowledge by acquaintance has some practical importance in medical diagnosis also; and therefore indirectly in medical treatment. The physician will ask his patient, "Do you feel better?" "Have you a pain in the shoulder?" And if the answers come, "I feel fine today"; "I have a very sharp pain here", the concepts 'pain' and 'fine' are used to characterize the given. Or the psychiatrist may inquire, "Are you anxious? Do you have an inferiority feeling?" when again the answers will involve the application of concepts to given experience, and will serve as guides to diagnosis and treatment.[6]

In an indirect way, finally, knowledge by acquaintance is of practical importance through its significance in the field of scientific research. I can best make this clear by contrasting its significance there with its function in the common sense perception and use of objects such as apples, chairs and tables. With regard to the latter, Lewis was right in claiming that we are not interested in characterizing the given, sensuous immediacy, but only in employing it as a sign for the recognition of transcendent objects, in preparation for action upon them: we take the given in our practical stride without bothering to name or conceptualize it as such. But in physics, on the other hand, the objects with which we may suppose we are dealing—molecules, atoms, electrons, or the

[6] Of course the physician does not have knowledge by acquaintance of the patient's feelings, but knowledge by description derived from the patient's answer, yet in order that the physician may have that kind of knowledge, the patient must first have had knowledge by acquaintance of his own feelings.

like—are so recondite, and actions involving them so remote, that we do not look through the given to those objects and actions, but pay attention to the given itself, as if it were all that we had. And only by describing in terms of definite concepts present tastes, smells, colors, apparent shapes, sizes and their coincidences (pointer readings) do we provide ourselves with data for the construction of scientific theories, to be applied in industry. It is by noting fine differences in the immediate—and this is knowledge by acquaintance—that the testing of scientific hypotheses proceeds, and each investigator must make these notes for himself.

Thus far I have tried to give a brief general account of knowledge by acquaintance and to exhibit its functions in experience. I wish now to consider certain further, more special characteristics of this mode of knowledge. Interesting problems will appear.

First, knowledge by acquaintance is always knowledge of existence.[7] This seems evident, as the object known is actually given to the concept which knows it, and, being given, here it is. Or, to put the same truth in other words, if a concept exists, then anything that fits into it must also exist. By contrast, knowledge by description does not imply the existence of the object of knowledge; of this history is the easy example. It would hardly appear worth while to argue the matter had not Santayana seemed to deny it in his paradoxical phrase, "Nothing given exists". So far as I can see, Santayana was led to accept this paradox for two reasons. First, because, as he himself admits, he came to use the term 'exists' with a meaning restricted to elements of what he called matter; and, if this convention is adopted, it does follow that nothing given exists, since the given belongs not to the realm of matter, but to the realm of spirit. But this convention is unwarranted; and if one accepts the Russellian analysis of a proposition asserting existence into one asserting that a concept has application, then, since, in the case of knowledge by acquaintance, the concept does have application in the given, the given must exist. On the other hand, care must be taken not to pass from the proposition "All that is given exists", to the proposition, "All that exists is given"; for the latter would imply that the concept to which anything is given would not itself exist unless it were given

[7] Plato: *Theaetetus;* 152C, Αἴσθησις ἄρα τοῦ ὄντος ἀεί ἐστιν καὶ ἀψευδὲς ὡς ἐπιστήμη οὖσα.

to something else, *in infinitum*. A close reading of Chapter VI in *Scepticism and Animal Faith* will reveal, I believe, that Santayana constantly confuses these two propositions, of which one is true and the other false; and much of the seeming cogency of his argument depends upon the confusion.

The other reason for Santayana's acceptance of his paradox is the seeming givenness of fictitious objects, such as the characters in a novel one is reading, which nevertheless could hardly be said to exist; and, he suggests, if to be given implies existence, then to think of anything, however unreal, would confer existence upon it.[8] But it is plain, is it not, that in reading *Les Misérables*, what is given is not Jean Valjean himself, but certain descriptions, the existence of which could not be in doubt if there were any concepts to which they in turn were given. So, while what I mention may not exist, since I may mention a centaur; yet my mentioning of a centaur would be known to exist if I were to know it by acquaintance through applying the concept 'mentioning' to it.

A second special fact about knowledge by acquaintance is its general infallibility.[9] In this regard it appears to differ from most modes of knowing, to which fallibility in various degrees is attached; and stands out together with pure deductive inference as a model. But this apparent infallibility raises many difficult problems. For example, does it prove that knowledge by acquaintance is analytic? When I assert that "This is blue", am I making a mere analysis of *This?* I have to confess that I once thought so, but I now see that such a judgment is not purely analytic. That there is analysis, is evident. Any concrete datum may become the starting point for a whole sheaf of judgments of acquaintance, which effect an analysis of it. Thus, "This is blue", but also "This is oblongish" and "This means a book cover", etc., are all propositions of this kind. Yet no one of these is purely analytic, for the reason that, as has been shown, each concept used, such as 'blue', has a base, and any judgment which asserts that "This is blue" creates a synthesis of *This* and the base of the concept; moreover, one could not know that "This is blue", unless one had had experience of something else that was blue. That the judg-

[8] *Scepticism and Animal Faith* 46, 47.
[9] See the passage from the *Theaetetus*, already quoted.

ment is not tautologous is clear from the fact that the *This* is a concrete sensum, with many other properties besides being blue.

However, the seeming infallibility of the judgment of acquaintance raises another problem; for, if infallible, how could it have a genuine contradictory, and can a judgment be a judgment at all, unless it can be either true or false?—unless its contradictory is at least meaningful?[10] Is it meaningful to say, "This which I find to be blue is not blue"? At one time this argument appeared to me to have great force, but today I do not regard it as conclusive. For while it is evident that a proposition is the kind of thing that may be either true or false, it is also clear that anything that is true, or anything that is false, is a proposition, whether or not it is conceivable that it might also be false or true, respectively. As to the question whether judgments of acquaintance have meaningful contradictories, it seems to me that they do not. For in accordance with the view that every concept must have a base in primary experience, it can be meaningful only when it can offer something for intuition or imagination, and a self-contradictory expression such as 'that which I find to be blue is not blue', can do neither. The same problem arises, as it well known, with regard to strict implications, such as "One plus one is two". Here also, by the test given, the contradictory of that proposition is not meaningful. If "3 + 25 + 11 is not 39" appears to be meaningful, it does so only because we are reading words, not meanings; for as soon as we attend to the meanings of the words, that is to say, as soon as we understand them, the sentence ceases to be meaningful. All mistakes in mathematics seem to be meaningful when we make them (and we make them because we carelessly or ignorantly manipulate symbols without acquaintance at the time with their meanings) but cease to appear so when we correct them. Similarly we can 'suppose' any 'grammatically' correct expression, mathematical or other, to be true, however absurd it is, so long as we ignore or are ignorant of its meaning. Accordingly, a person who knew English grammar, but not English vocabulary, could 'suppose' "This which I find to be blue is not blue", to be true. The indirect proof in mathematics, in which we begin by 'supposing' that an expression has meaning, and then prove that it has no

[10] See C. I. Lewis and C. H. Langford, *Symbolic Logic* 477, 478, 481.

meaning, is, I believe, an illustration of this point; for the expression is not accepted as true, *understood as an absurdity*, for it is only discovered to be an absurdity as a result of the proof.[11]

However, there are good reasons for doubting that knowledge by acquaintance is infallible in all cases. For may I not be in doubt that a certain tint I am looking at is blue or green; or seeing a speckled hen, may I not misjudge the number of speckles, or looking at the starry heavens above, the number of stars; when, of course, the matter at issue is not the number of physical stars or speckles, but of items in a visual phenomenon? Since the solution of the speckled hen type of difficulty is more easily found than the solution of the blue-green type, I will consider it first. Two proposed answers to the problem[12] must, I believe, be rejected. One suggestion is that since we cannot determine the number of speckles or stars in the phenomenon, there is no definite number. This view is dependent on the doctrine that all that is presented is known, which I have rejected throughout this paper, on the ground that presence and knowledge by acquaintance are two different things. The other suggestion is that number concepts are vague, but this also seems inadmissible; for if any concept is precise, it is number, the large as precise as the small. My own view therefore would be that the number of speckles or stars is definite, but that I may not know how many there are, for the simple reason that, owing to the fleeting or complex character of the phenomenon, I do not have time to count them.[13] I can, to be sure, always guess at the number, but guessing is not knowledge by acquaintance, even though the guess and the given are compresent; for in addi-

[11] But see the interesting discussion of this matter by Alice Ambrose: "Self-Contradictory Suppositions", in *Mind* LIII, No. 209, 48.

[12] See R. Chisholm, "The Problem of the Speckled Hen", *Mind* LI, No. 204; also, Fr. Waismann: *"Einfuehrung in das Mathematische Denken"* 89, and a review by C. H. Langford, *Journal of Symbolic Logic*, II, 142.

[13] One may, however, properly ask what it means for the speckles or stars to have a definite number. My answer to this question would be as follows: In the first place, we do not 'enjoy' or 'experience' them as having the number which they do have; at best we enjoy them simply as 'numerous' or 'many'. It is because of this fact that their having a definite number is denied. On the other hand, what is meant by having a definite number includes these two facts: one, each single item is present and contributes something to the total *gestalt* of the phenomenon, and therefore 'counts' even though not counted; and two, the phenomenon is such that, if one did count the items, a definite number would be arrived at—in other words, a definite number concept would be found to 'fit' the collection of items, points of light or speckles, as the case might be.

tion to being compresent, the concept should also 'cover' its object, which it does not do when it is a mere guess, but, as it were, stands aside from its object.

The blue-green type of difficulty arises when we attempt to judge elements of the given belonging to contrasting kinds, which shade gradually and imperceptibly into each other. In such cases we do not feel certain whether an element at or near the boundary fits into the concept applicable to the elements on one side, or into the concept applicable to those on the other side. Thus we are at a loss to decide whether a color near the boundary between the obviously blue and the obviously green is blue or whether it is green. Another illustration may be called the here-there situation, where we are confronted with a line, surface or volume divided into two contiguous portions; a parallel situation relating to temporal transition may be called the now-then situation. In the former case we do not know whether an element is here on this side or there on that side; in the latter, whether it is present or just past. I think it should be emphasized, however, that we are in doubt only near the boundary—away from the boundary we have complete certainty that the tint is blue, or that it is green; that the element is here or that it is there; that it is now or that it is then; so that the existence of boundary situations, while it may limit the range of certainty of knowledge by acquaintance, does not destroy it: it can be certain everywhere except in these cases. The establishment of new concepts, such as 'blue-green' or 'on the boundary' does not remove the limitation, for the difficulty breaks out again in deciding whether an item is, say, blue-green or blue, here or on-the-boundary, as one gets near to blue-green or on-the-boundary. A favorite way of explaining this limitation is through the concept of the vagueness of all concepts; but I wish to make the point that the difficulty is not with the concept but with reality, or at least with reality so far as given, which is full of boundary situations, qualitative, extensive and temporal. The mathematical theory of limits and the continuum does not help, for, whatever may be believed regarding the physical universe, given experience is certainly not continuous in that sense, as Bergson proved in his discussion of motion, and as may be shown with reference to all other such situations. The epistemological difficulty rests, there-

fore, on a metaphysical situation, and for metaphysical situations there is no remedy: one can only accept them as Margaret Fuller accepted the universe.

We have thus uncovered a limitation to knowledge by acquaintance. It is worth pointing out however, by way of compensation, that even in boundary situations, we can always have some knowledge in this mode, only of a less specific, more generic character; for in the blue-green situation, although we may not know whether a tint is blue or whether it is green, we can know that it is colored, and that it belongs to the blue-green series rather than to the orange-red series; even as, though we may not know whether an element at a boundary is here or there, we may know that it belongs within the total region, which includes both contiguous portions.

Interesting light on this whole subject is thrown by a study of the well-known fact that in matching given qualities, say colors, judgments of sameness appear not to be transitive: if we find that A matches B and B matches C, we cannot be sure that A will match C. If now we try to hold to the certainty of judgments of acquaintance, it would follow, when we seem to find that A does not match C, that sameness is not transitive; while, on the other hand, if we still maintain, as I think we must, that sameness is transitive, then it would appear to follow that one presented quality may be different from another without our knowing it to be different, which in the eyes of some, I fear, would mean the end of knowledge by acquaintance. But, on the basis of the view that such knowledge is conceptual, the latter conclusion is unwarranted; for qualities may be different, even as elements of the given, without our being able to know that they are different, provided they belong to a boundary situation. And that is precisely the situation at hand: along a series of more or less different items we are not in doubt as to the application of our concept, 'difference', when the members of the series are far enough apart, but as soon as we approach those items that are very little different, our concept becomes vague and we do not know how to judge, and the vagueness has its foundation in the metaphysical fact that sameness and difference shade into each other with reference to any universal showing degrees. Once more, therefore, we reach a limitation to the

certainty of judgements of acquaintance, for which in the end there is no remedy.

Two important conclusions follow: first, that we could never be sure of sameness of quality, even if it existed, and therefore, second, that our concepts are always generic, since a given quality judged cannot be found to be the same as the base of the concept, but only similar; in other words, there cannot be ultimately specific concepts: we can 'enjoy' a concrete quality, but can have no concept of its concreteness. Nevertheless, we should not hastily conclude that the individuality, the last specificity of a quality is unknown. On the contrary, that is precisely what is known in knowledge by acquaintance; that is the subject of our judgments; but the subject is richer than the predicate. Knowledge occurs when the subject (the individual) fits into the predicate or concept, and therefore illustrates the generic universal embodied also in the base of the concept: nothing more can be demanded.

A third characteristic of knowledge by acquaintance is the fact that when we know, we may also know that we know. It is interesting to recall that Spinoza believed that whenever we know, we know that we know.[14] Spinoza believed this because he thought that all knowledge is either intuition or mathematical demonstration. But there are species of knowledge where we do not know that we know, as for example, what Plato called δόξα, opinion. We may, for instance, have an opinion of the truth or falsity of some scandal affecting a neighbor, and if our concept is as the situation is, we will know, but will not know that we know. By a reflexive act, we may know the opinion we hold, and that will be knowledge by acquaintance; hence we may know that we know that we hold this opinion; but we cannot know that our opinion is true, even when it is true. But in knowledge by acquaintance, we may know that we know because, by a reflexive act, we can observe the fitting of the concept on to the object, when it does fit onto it. If the mind were complex enough, we might not only know that we know, but also know that we know that we know; but needless to say such a high degree of reflectiveness is hardly achieved.

A fourth characteristic of knowledge by acquaintance is its privacy. By this I mean that the concrete objects of such know-

[14] Spinoza, *Ethics*, II. Proof xliii.

ledge are known by acquaintance only by the self to whom they are present, whereas, in contrast, knowledge by description may theoretically be had by anyone, and of all items of existence whatever. This is a simple and obvious corollary to the very nature of knowledge by acquaintance, and I mention it for the sole purpose of stressing that it does not imply that a personal field of experience is utterly private or unknowable to another self. For, in the first place, the universals embodied in a private field may be known by acquaintance by anyone; and secondly, even concrete items may be known by description by anyone. So—to use one of our previously employed illustrations—when I answer the physician's question by saying that I have a pain in the shoulder, the physician may know, (1), by acquaintance, the painness of my pain, because he himself has had similar pains; and (2), by description, the very pain that I feel. (1) and (2) make communication between centers possible. But to go into the matter would require a study of knowledge by description and another article.

A final characteristic of knowledge by acquaintance is perhaps the most fascinating of all—the transiency of some of the propositions affirmed in such knowledge, and therefore the transiency of their truth.[15] To see this is very disturbing to conventional philosophic views, and would be denied by many. Yet it is a clear consequence of the following facts regarding knowledge by acquaintance: (1) The subject of the proposition is the very datum judged itself. In the proposition "This is blue", the subject is the blue present item referred to. This fact may be obscured in the eyes of some through the use of the word 'This'; but obviously, although it is the verbal subject, 'This' cannot be the real subject of the proposition, since it is a pure index without any meaning otherwise. (2) In such cases, the 'This' may be transient; *e.g.*, the phenomenal blue sky disappears at night. (3) Since part of the proposition is transient, namely its subject, the proposition is transient, as well as its truth. At night 'This' is no longer a blue sky, but a black sky; hence the proposition "This is blue" does not exist, and if it did, would be false, first because its subject

[15] The transiency of certain truths was, of course, recognized by Aristotle. See, for example, *Metaphysics*, 1051 b, 13-15.

no longer exists, and second, because 'This' is now not blue, but black.

The conclusion should not be drawn, however, that all propositions affirmed in judgments of acquaintance are transient, necessarily. For it may be the case that we can know by acquaintance eternal aspects or items of reality—certain universals always embodied in existence, categorial characters—spatiality, causality, relatedness, and the like, or an eternal entity called 'God' or 'the Divine'. Moreover, corresponding to every transient proposition, there arises a historical proposition, which is eternal. For example, corresponding to the proposition, "This is blue", there will arise the historical proposition "The item indicated by *This* in the field of experience of So-and-so at 12 noon, May 17, 1944, was blue", which is eternally true. I would stress, nevertheless, that this second proposition is a different one from the first, although so closely related to it; for one thing, it is not a proposition involved in knowledge by acquaintance, but in knowledge by description, and for another, it does not entail the existence of its subject.

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THE STRUCTURE AND FUNCTION OF ORGANIZATION

IN THIS essay we propose to set forth the structure and the function which are common to all empirical organizations, to serve as an instrument for the investigation of empirical organizations at every level. The aim of such a canon is to show not only the purposive functions of organizations, but primarily the composition which makes possible the fulfillment of such functions. We are therefore concerned first with static analysis. Then it will be seen how an understanding of the analysis of organization promotes a better comprehension of the interactions of organizations as wholes.

The study of organization, then, must be approached from two standpoints: that of statics and that of dynamics. Statics treats of organizations as independent of their environment and therefore as isolated from problems of interaction with other organizations. Dynamics treats of organizations as dependent to some extent upon their environment and therefore as interactive with other organizations. The division of the topic into statics and dynamics is of course not absolute. Actually, no organization is ever completely static or dynamic; all have structure and all suffer functional change. But statics and dynamics are logical and abstract divisions in terms of which the nature of organization can be determined. We cannot hope to understand the dynamics of organization without some prior understanding of statics.

I. STATICS

(1) *The Basis of Organization.* In treating of structure we first regard the organization itself as a whole. The whole obviously analyzes into parts. These parts themselves have parts, which we shall term subparts. Thus there are two levels of analysis,

wholes (from which the analysis is made),
parts, *and*
subparts.

Wholes need no detailed description. Anything is a whole which operates in quasi-independence of its environment. A rock is a

whole, and so is a mammal, an apple, a committee. Wholes are not a level of analysis but that from which analysis starts. Parts are the first level of analysis. All that need be said of them here is that they are the immediate basic factors into which wholes can be analyzed, and that they are of a certain quantity. A rock analyzes into such parts as crystals, an apple into such parts as skin, meat and seeds. Subparts are the second level of analysis. They are the immediate factors into which parts can be analyzed. A crystal analyzes into molecules, apple meat into cells. It should be noted that subparts are parts of parts in the same sense in which parts are parts of wholes. Of course it is true that wholes themselves are parts of still larger wholes, and that subparts may be analyzed into sub-subparts. For example, rocks are parts of mountains, apples of the tree-system, and molecules may analyze further into atoms, and cells into molecules. But it is our contention that for purposes of analysis of structure no more is required than the whole from which the analysis starts and two levels of analysis.

(2) *Elements of Relations.* There is another factor in the analysis of organization which we may temporarily describe as the ways in which parts exist in combination with other parts to form the structure of the whole. These 'ways of combination' are not basic in the same sense in which parts and subparts are basic. They are the kinds of relations between parts, the ways in which parts combine. Apple is not composed of meat, skin and seeds in any haphazard combination but in a definite set of relations between these. The elements of relations which exist between parts of an organization form a certain group of relations, listed as follows:

(a) transitivity	(-a) intransitivity
(b) connexity	(-b) non-connexity
(c) symmetry	(-c) asymmetry
(d) seriality (transitive, connected, asymmetrical)	(-d) aseriality
(e) correlation (one-many$_1$, one-one$_2$, many-one$_3$, many-many$_4$)	(-e) non-correlation
(f) addition	(-f) non-addition
(g) multiplication	(-g) non-multiplication
(h) commutation	(-h) non-commutation
(i) association	(-i) non-association
(j) distribution	(-j) non-distribution
(k) dependence	(-k) independence

There may be other relations between parts in any concrete organization—an indefinite number of others, in fact. But such relations do not bear on the question of organization *qua* organization. The relations listed above are the determinate ones for organization, those into which the relations of parts of an organization may be analyzed without remainder. Before going further with our analysis we may define what is meant by these terms which, although commonplaces of logic, may appear strange in this context.

(a) Transitivity is such that if it relates two parts to a middle part, it relates the extreme parts to each other. (-a) Intransitivity is the absence of this relation. For example, the parts of an apple are transitive, for if the skin of an apple encloses the meat, and the meat encloses the seeds, then the skin encloses the seeds. An aggregation of three grains of sand is intransitive, since the extreme parts are not related to each other by a middle part.

(b) Connexity is the relation of two parts without the mediation of a third part. (-b) Non-connexity is the absence of this relation. For example, the skin and seeds of an apple are non-connected. The three grains of sand are connected.

(c) Symmetry is the relation in which the interchange of the parts does not involve any change in the relation. (-c) Asymmetry is the relation in which the interchange of the parts does involve a change in the relation. For example, the relation of the skin of an apple to the meat is not the same as the relation of the meat to the skin, and is therefore an asymmetrical relation. The three grains of sand are symmetrical since an interchange of parts does not involve any change in their relation.

(d) Seriality is the relation which is transitive, asymmetrical, and connected. (-d) Aseriality is the absence of any one of these relations. For example the enclosure of apple seeds by meat and of meat by skin is a serial relation (see a, b, and c above). The three grains of sand are aserial, since they lack asymmetry.

(e) Correlation (one-many$_1$, one-one$_2$, many-one$_3$, many-many$_4$) is the relation between two series such that for every part of one series there is a corresponding part in the other series and no part of either series is without a corresponding part in the other. All relations are examples of one type of correlation. For

example, of two apples, the serial parts of one correlate with the serial parts of the second.

(f) Addition is the relation of the joining of parts so as to increase their number. For example, when the skin of an apple is added to meat and seeds, there are three parts instead of two.

(g) Multiplication is the relation of the joining of parts so as to involve them with each other. For example, the relation of skin, meat and seeds in a whole apple is multiplicative rather than additive because these parts are involved with each other in ways other than mere aggregation.

(h) Commutation is the relation in which addition and/or multiplication is symmetrical. (-h) Non-commutation is the relation in which addition and/or multiplication is asymmetrical. For example, the relation of skin, meat and seeds is non-commutative, since the parts are multiplicative (*cf.* g above) only in serial order, *i.e.*, they are asymmetrical (*cf.* d above). The three grains of sand are commutative, since their addition and/or multiplication is symmetrical.

(i) Association is the relation which is commutative and connected. (-i) Non-association is the absence of this relation. For example, the relation of skin, meat and seeds is non-associative, since it is non-commutative (see h) and association requires commutation. The three grains of sand are associative, since they are both commutative (see h) and connected (see b).

(j) Distribution is the relation which is commutative and intransitive. (-j) Non-distribution is the absence of this relation. For example, the relation of the skin, meat and seeds of an apple is non-distributive since skin, meat and seeds are non-commutative (see -h) and distribution requires commutation. The three grains of sand are distributive, since they are both commutative (see h) and intransitive (see a).

(k) Dependence is the relation in which the existence of one part is conditioned by some other part. (-k) Independence is the absence of this condition. For example, the limb of an animal is dependent upon the circulatory system, but not the circulatory system upon the limb. The three grains of sand are independent of each other. The heart and the circulatory system are interdependent.

(3) *Rules of Organization.* We now have the basis of organization, *i.e.*, wholes, parts, and subparts, and we also have the elements of relations between parts. But these are not sufficient to define or determine any given organization. In addition to them we need certain rules in terms of which parts and their relations are constitutive of organizations. We shall list these rules and then discuss them. They are:

1. Structure is the sharing of subparts between parts.
2. Organization is the one controlling order of structure.
3. One more level is needed to constitute an organization than is contained in its parts and subparts.
4. In every organization there must be a serial relation.
5. All parts are shared parts.
6. Things in an organization which are related to parts of the organization are themselves parts of the organization.
7. Things in an organization which are related to related parts of the organization are themselves parts of the organization.
8. The number of parts and of their relations constitutes complexity.

1. The linkage of parts is accomplished by means of common subparts and not by mere juxtaposition or external linkage. The joining of two parts is effected by a subpart which they have in common, and this is the basis upon which all structures are constituted. For example, in carbon tetrachloride (whole) the carbon (part) and the chloride (part) share electrons (subparts).

2. It is not simply the fact of linkages but rather the principle according to which all linkages fall together into one controlling order, which makes an organization. For example, it is the arrangement of the four atoms of chlorine in a certain spatial relation around one atom of carbon which constitutes the organization, carbon tetrachloride.

3. No number of subparts and parts constitutes an organization, which is essentially a property of the whole. The organization is one level above its analytic parts and subparts, and thus the whole involves another level. For example, carbon tetrachloride consists of something more than merely one carbon and four chlorine atoms.

4. The serial relation is the essential one in every organization. Other relations may and usually do exist in organizations but they are not necessary to the constitution of an organization. In the analysis of every whole there must be found a controlling relation which is asymmetrical, transitive and connexive. For example, in

carbon tetrachloride, the transitive relation is the relating of any two chlorine atoms to the carbon atom in such a way that they are related to each other. The asymmetrical relation is the fact that the carbon and chlorine atoms cannot be interchanged without destroying the carbon tetrachloride. The connexive relation is the relation of the carbon to the chlorine atoms without the intermediation of any third atom, *i.e.*, of any external bond.

5. There is nothing in an organization except parts which have subparts in common. Any item which is not so shared is extraneous to the organization and not a part. For example, in carbon tetrachloride, all atoms of carbon and chlorine are shared, and there is no unshared ether atom.

6. Anything in an organization which is related to part of that organization is, by virtue of that relation, itself part of the organization, and not a foreign body. For example, any atom in carbon tetrachloride which is related to the carbon or chlorine atoms is itself a part of carbon tetrachloride.

7. Sometimes there are things in an organization which are not related to any single part of the organization, but which may be related to two or more parts. That is, the thing in the organization may be related to a complex of parts without being related to any one of the parts in the complex. In this case, the thing so related is part of the organization. For example, certain electrons which are required by carbon and chloride in combination are themselves part of carbon tetrachloride, although they may not be required by either carbon or chlorine separately.

8. The number of parts and of their relations, *i.e.*, subparts, constitutes the complexity of an organization. This rule and the yardstick of integrality, or kinds of organization (Statics, section (d)) form a pair of criteria. Complexity is seen to reduce to a mere matter of counting parts and subparts. For example, carbon tetrachloride has a complexity of 5 parts and 31 subparts.[1]

(4) *Kinds of Organization.* Having set forth the bare outline of the basis, elements, and rules of organization, we may now proceed to classify organizations as wholes into their various kinds.

[1] This count includes only the interactive, outermost shell of electrons. The inactive nuclei are not here considered.

The kinds of organization constitute degrees of integrality, as follows:

(a) AGGLUTINATIVE The governing relation is aseriality, where parts have intransitivity, connexity and symmetry.
Relations are therefore -a, b, c, -d, e_4, f, -g, h, i, j.

(b) PARTICIPATIVE The governing relation is seriality. Participative organizations subdivide into three kinds, as follows.

(α) ADJUNCTIVE The governing relation is symmetrical independence. The sharing of subparts is not necessary to either of the parts. Parts can survive their separation.
Relations are therefore a, b, -c, d, e_4, f, g, -h, -i, -j, -k.

(β) SUBJECTIVE The governing relation is asymmetrical dependence. The sharing of parts is necessary to one of the parts but not to both.
Relations are therefore a, b, -c, d, e_3 or$_3$, -f, g, -h, -i, -j, k.

(γ) COMPLEMENTAL The governing relation is symmetrical dependence. The sharing of parts is necessary to both of the parts. Neither part can survive separation.
Relations are therefore a, b, -c, d, e_2, -f, g, -h, -i, -j, k^2.

It should be understood that by 'Kinds of Organization' is meant their logical and structural differences and not their division by qualitative or common sense description. The division of organizations into various kinds is not arbitrary, although there are other classifications which could be made. The present one is made specifically according to the governing relations of the organizations. It needs to be pointed out that this classification is ideal in the sense that no actual organization ever completely answers to it.[2] However, since everything actual is an organization, everything actual has to fall under one or another, or under several, of the kinds of organization listed above.

The agglutinative organization is the loosest form of organization. In it the parts have only the spatial relation of contiguity. The more intimate relation which consists in the sharing of subparts by parts is absent here. Indeed there may be some question

[2] The term 'ideal' is employed here not as a synonym for mental or subjective but rather as a synonym for perfect. *Cf.* chemically pure iron, the ideal gas, etc.

as to whether an agglutinative organization should be called an organization and not a mere aggregate of independent organizations. There is some justice in the contention that such an affair is not an organization, since it does not obey the Rules of Organization.[3] It violates Rules 1, 4, 5 and 6. We include the agglutinative as an organization only because of its illustrative value as a borderline case. An aggregate in some senses is an organization, but so tenuous a one that it can be easily dissipated and does not offer the kind of resistance which we may expect from an organization. Spatial relations are the least binding relations, yet they are not quite nothing, and to ignore them altogether is to overlook subtle relations of organization which presumably must have some effect.

One example of agglutinative 'organization' is a pile of sand whose grains may temporarily form a pattern. The same can be true of a crowd of people, a host of raindrops, gaseous molecules, a constellation of stars.

However, most of the organizations encountered are Participative, where, besides spatial relations between parts, other relations enter to bind them closer together. In other words, in Participative organizations parts are held together by the subparts which they share. The ways in which parts share subparts vary, and it is in terms of this difference that the Participative classification lends itself to subclassification. But all the sub-classifications have one essential property: they are all governed by the serial relation. The sub-classifications of Participative organization are Adjunctive, Subjective, and Complemental.

In Adjunctive organizations parts share subparts, but this sharing is not so integral to either part that it cannot survive separation. Thus to a certain extent parts are independent of the organization of which they are parts, and this independence contributes to the flexibility of the whole organization. In the case of Adjunctive organizations, the governing relation of symmetrical independence means that parts are on a parity with respect to their relations with other parts, and that neither is dependent upon the other in any necessary sense.

[3] See p. 23.

Adjunctive organizations may be exemplified as follows: the relation between moss and the tree on which it grows; the relation between fingernails or hair and the human organism; the relation of "captured" planets to the bodies around which they revolve; the relation of a nation to the League of Nations.

In Subjective[4] organizations parts share subparts, but this sharing though necessary to one of the parts is not necessary to the other. That is to say, one part can survive separation but the other cannot, and this contributes to the stubbornness of the whole organization. In the case of Subjective organizations, the governing relation is asymmetrical dependence. This means that parts are not on a parity with respect to their relations with other parts, and that one is dependent upon the other in a necessary sense, but not *vice versa*.

Subjective organizations may be exemplified as follows: the relation between arm and body of the human organism; the relation between the rings and Saturn; the relation between honorary presidents and clubs.

In Complemental organizations parts share subparts and this sharing is necessary to both the parts. That is to say, neither part can survive separation from the other, and this brings about the rigidity of the organization. In the case of Complemental organizations, the governing relation is one of symmetrical dependence. This means that parts are on a parity with respect to their relations with other parts, and that each is dependent upon the other.

Complemental organizations may be exemplified as follows: the relation between the heart and the blood; the relation between the two parties of a two-party democracy; the relation between roots and bark of a tree.

II. DYNAMICS

In this section we shall approach the theory of organization from the dynamic standpoint. It will entail the consideration of organization no longer isolated from other organizations which go to constitute the environmental world of interaction. Here the ab-

[4] The term 'subjective' is not employed here in its epistemological sense, as meaning the mental end-term of the knowledge relation, but rather as subject or subordinate.

stract organization which we examined under Statics is further examined as it operates and is operated upon, *i.e.*, functions with, things outside itself. The effect within upon parts (the strains) will be examined as it is occasioned from without by the interaction of wholes (the stresses). Or, conversely, the effect upon wholes (the stresses) will be examined as it is occasioned by the interaction of parts (the strains). Viewed either way, what is being considered is function.

(1) *Elements of Interaction.* The field of dynamics has to do primarily with certain conditions which prevail in the world of action and reaction. These may be described under the following terms:

1. Organization-Environment
2. Action-Reaction
3. Availability-Virtual indifference
4. Equilibrium-Disequilibrium
5. Saturation-Insufficiency-Superfluity
6. Flexibility-Rigidity
7. Stability-Instability

1. Organizations have been defined as wholes which operate in quasi-isolation from their environment. This is the static view. From the point of view of dynamics, wholes must be considered in their relation to environment. The relation of organization to environment is a reciprocal election. For example, fish dynamically have to be treated in relation with other fish and sea water, plankton, etc. Similarly, Boy Scout organizations cannot be considered without the environment of other social organizations, and the world at large.

2. Every actual organization is in constant change or motion. This change or motion is of two sorts. The environment changes the organization and the organization changes the environment. Thus there is an action and a reaction effective in every instance of change. For example, the ocean affects the water-content of the atmosphere and the water-content of the atmosphere affects the ocean. The policy of the United States affects and is affected by the actions of the German government.

3. Availability is a characteristic of a limited part of the environment of an organization—that part which, determined by

the nature of the organization, importantly affects and is affected by it. Virtual indifference is a characteristic of that less limited part of the environment of an organization—that part which, determined by the limited nature of the organization, hardly affects or is affected by it. There is no absolute line which can be drawn between availability and virtual indifference; they shade off into each other. Horses are importantly affected by their interaction with human beings, but hardly interactive with the gravitational field of the star Sirius. The Veterans of Foreign Wars affect and are affected by the foreign policy of the United States, but are hardly affected by the religion of the Sikhs.

4. Equilibrium is the condition in which the influence exerted by the organization upon its available environment and the influence of the available environment upon the organization are in balance. Disequilibrium is the condition in which this balance does not exist. A minimum amount of equilibrium is a *sine qua non* of organization. For example, the tapeworm is so organized and in equilibrium with its environment in the intestinal tract that it resists the action of the pepsin and trypsin in which it is bathed. The family of European states is at present in a condition of violent disequilibrium.

5. Saturation is the condition of an organization in which all parts share and all subparts are shared. Insufficiency is the condition where all parts share and there are some unshared subparts. Superfluity is the condition where there are some unsharing parts and all subparts are shared. A saturated organization is one which hardly reacts with the available environment. It is more or less 'satisfied', and to that extent inert. There is an optimal pragmatic limit to the numbers of parts in an organization. An insufficient organization is one which is to be satisfied or saturated, and which is therefore elective. It can achieve this satisfaction only by interacting with the available environment, in order to take on parts. A superfluous organization is oversaturated, and can achieve equilibrium only by interacting with the available environment in order to get rid of its superfluous parts. Therefore it may be said that insufficiency, saturation, and superfluity are comparatives in a scale of saturation: too little, enough, and too much. For example, argon is an 'inert' gas because it is saturated, *i.e.*, all its electrons

are shared and it has none to give up. Chlorine is an active gas because it is insufficient, *i.e.*, it has not enough electrons. And lithium is an active element because it is superfluous, *i.e.*, it has too many electrons.[5]

6. Flexibility is the capacity of an organization to suffer limited change without severe disorganization. Rigidity is the absence of this capacity. In a flexible organization the relations between the parts can be changed by the available environment by reaction without the destruction of the equilibrium. A flexible organization would of course have to be one in which the parts were not all complemental, although complemental relations may exist in flexible organizations. A rigid organization, on the other hand, must resist absolutely the action of the available environment, for if it cannot it falls into disequilibrium, *i.e.*, it is destroyed as an organization. For example, a river is a flexible organization since its course and dimensions may be altered to a very great extent without damage to its essential structure. A vase is an example of a rigid organization, since it cannot suffer any deformation without destruction. A democracy is flexible in comparison with the rigidity of a theocracy. A democracy can change its policy radically and still remain a democracy, as for instance the United States, while a theocracy is held to a minimum amount of change and resists all efforts to alter it, as for instance Tibet.

7. Stability is the capacity of an organization to remain in equilibrium. Instability is the absence of this capacity. Of course stability is not unrelated to internal structure, as may be seen from the fact that stability may depend either upon the flexibility or the rigidity of the organization. That is, an organization may be stable either because it is flexible enough to meet the action-reaction demands of the available environment and thus preserve its equilibrium, or because it is so rigid that it fends off the action. A rock is an example of a relatively stable organization which is stable because it is rigid. A feather is an example of a relatively stable organization which is stable because it is flexible. The Roman Catholic Church is an example of a relatively stable social organization which is rigid. The Jewish social group is an example of a

[5] *E.g.*, it is easier for lithium to give up one electron than it would be to take on seven in order to achieve its equilibrium which consists in the octet.

relatively stable social organization, which has been flexible enough to adapt itself readily to new conditions.

(2) *Rules of Interaction.* We now have the elements of interaction, but by themselves they are not adequate for dynamical analysis, and we need in addition rules to show how the elements function. These rules are:

1. Every organization elects some other organization or organizations.
2. In every action there is a sharing and an interchange.
3. All action is occasioned by the available environment.
4. Available environment is limited by interaction with organization.
5. All organizations strive toward equilibrium.
6. Saturated organizations remain unchanged.
7. Insufficient and superfluous organizations tend to change.
8. Flexibility is a condition of growth.
9. Rigidity is a condition of maintenance.

1. Dynamics pervades the organizational field. No organization is ever at rest or neutral toward all other organizations. It is impossible for any organization to be altogether without election. For example, a stone attracts and is attracted by the earth and every object on it. Chlorophyll strives to take energy from the sun's rays.

2. No action ever takes place without altering all those organizations which are involved in the action. This alteration consists in an interchange of parts and/or a sharing of subparts. The dynamical field is one in which an exchange is continually taking place. For example, two atoms may combine by sharing an electron, or two countries may exchange products.

3. Every strain in an organization is initiated by the stress. The largest change may take place within the organization, which may in turn react with the environment; but even in this case the initial disturbance must have occurred in the environment. Of course this does not mean that the reaction of the organization is a mere mechanical response, equal and opposite to the stimulus. The response is inevitably dynamical. But although the organization is dynamical in its response, it is never absolutely initiative. For example, illness in the organism is occasioned by something from the environment, *e.g.*, disease germs. Even so seemingly self-initiated a process as abstract thought is always occasioned by

some outward stimulus however remote the stimulus may be from the train of thought it initiates.

4. We have said that available environment is that part of the environment which importantly affects or is affected by the organization. We can see now that by 'importantly affects' is meant interacts dynamically. Available environment is just as much affected by organization as organization is by available environment. For example, the cacti of the desert do not have as part of their available environment the moisture of the tropics because they are unable to interact with it; but they do affect the air of the desert. A book and a lamp on the same table do not share each other's available environment because they do not dynamically interact.[6]

5. Equilibrium is the ideal state to which all organizations aspire; its absolute attainment would mean permanence for the attaining organization. All interaction by organizations with their available environment conduces toward this ideal. For example, the biochemistry of the human organism maintains an equilibrium of organism and its waste products on the one hand and the available environment and its fresh supply on the other. A stone manages to maintain more or less equilibrium by virtue of its paucity of available environment, with which there is very little interchange.

6. An ideally saturated organization by definition could not interact with the environment since it has nothing to give to it and wants to take nothing from it. Therefore it must remain unchanged: an ideal condition which no organization ever completely attains. For example, argon is a relatively stable organization, as is also helium; in both chemical elements there are no free electrons to be shared. The Parsee social group is relatively more saturated than the Christian Scientist group, because it has less to give and needs less.

7. Under- and over-saturated organizations react with the available environment in the effort to gain an equilibrium. Because they seek a condition where they will be safe from change, they are forced to cross a field of change. For example, labor unions are insufficient organizations which make strenuous efforts to gain

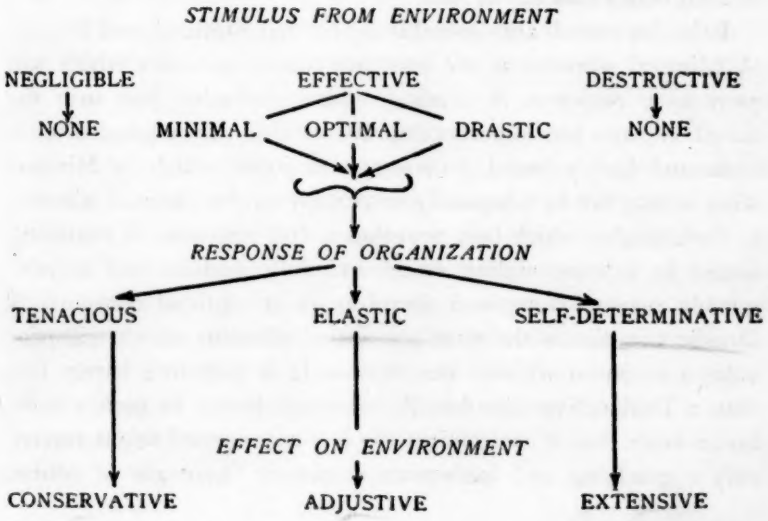
[6] Of course there is some interaction, *i.e.*, that which takes place because of the gravitational field; but this is a case of virtual indifference.

further members. In chemistry an over-saturated solution of salt is an example of a superfluous organization, since the act of throwing down crystals is one of change.

8. It is apparent from the above that only insufficient organizations can grow, but there is another condition of growth which depends on the ability of the organization to suffer change and still preserve its essential integrity. The condition of flexibility depends upon the internal constitution of the organization, *i.e.*, upon the fact that its parts are independent to some extent. This makes growth possible. For example, the young of any biological species are more flexible than the adults. Similarly, a church is more flexible in its formative stages than it is when its tenets have become fixed.

9. The more resistance an organization offers to the environmental changes imposed on it, the more permanent it is. The condition of rigidity depends upon the internal constitution of the organization, *i.e.*, upon the fact that its parts are interdependent to some extent and closely knit. For example, bone is more closely knit than muscle and hence more rigid and permanent. The members of the family group are more interdependent than a political party; hence the family is more rigid.

(3) *Kinds of Interaction.* Having set forth the elements and



the rules of interaction, we may now set forth the kinds of interaction in an attempt to show how the dynamic sequence of stimulus-response-effect operates in the relations between organization and environment.

Stimuli from the environment are either negligible, effective or destructive. A Negligible stimulus is one which is so slight that it provokes no organizational response. The Negligible stimulus is a sub-threshold affair. Of course every stimulus obtains some response; but to say that it provokes no organizational response is to say that it produces no specific reaction of the organization as a whole. To brush past a penny scale provokes no response from the scale. A Destructive stimulus is one which is so strong that it also produces no organizational response; in fact it destroys the organization. A high charge of gunpowder in a shotgun shell would destroy both shell and shotgun.

An Effective stimulus is one which is strong enough to provoke an organizational response, but not too strong. It not only differs in degree from the Negligible and Destructive but it also differs in kind because it brings about a specific response which they cannot. To weigh on a penny scale, or to fire a shotgun with the properly charged shell is to provoke specific responses from the scale and the gun as whole organizations. Thus it is only the Effective stimuli which concern us here.

Effective stimuli are divided into Minimal, Optimal, and Drastic. A Minimal stimulus is the least amount of stimulus which will provoke a response. A Minimal stimulus reaches just over the threshold; any less stimulus than Minimal is not responded to. A command barely heard provokes a response which is Minimal since it may not be adequately responded to. An Optimal stimulus is the stimulus which best provokes a full response. A command issued in a 'commanding voice' and fully audible will be adequately responded to, and therefore is an optimal stimulus. A Drastic stimulus is the most amount of stimulus which will provoke a response without destruction. It is therefore barely less than a Destructive stimulus. A command issued in such a stentorian voice that it antagonizes the one commanded might receive only a grudging and inadequate response. There are of course

some situations in which the Effective stimulus is equally effective whether it is Minimal or Drastic, *i.e.*, where for all purposes any degree of it is Optimal. Such a situation is the pushing of an electric button, which rings a bell equally whether it is pushed slightly, harder or extremely hard.

The nature of the response of the organization is dependent upon the character of the organization itself. The response of the organization from an Effective stimulus in the environment is either Tenacious, Elastic, or Self-determinative. A Tenacious response is one which is marked in the organization by a tendency to preserve its original available environment, and thus by fending off external intrusions it resists any change whatsoever. A turtle is not altered appreciably by the way in which it reacts to its world. An Elastic response is one which is marked in the organization by a tendency to give and take with its original available environment, and thus by working with external intrusions it resists change. A tree that has the resiliency to give with the wind may preserve itself better than if it resisted. A Self-determinative response is one which is marked in the organization by a tendency to change with its available environment and yet to remain itself by taking elements from the available environment and transforming them to suit itself. A horse is sensitive to new factors in his environment such as a stable mate, flies, a new master, and in some ways he makes responses which have effects upon these factors.

The effect on the environment of the response of the organization is either Conservative or Extensive. A Tenacious response on the part of an organization produces a Conservative effect on the environment. That is to say, it affects it as little as possible, and makes no alteration in its conditions. A turtle world of air and sea is not made very different by the way in which the turtle reacts to it. An Elastic response on the part of an organization produces an Adjustive effect on the environment. That is to say, it affects it somewhat and makes some alteration in its conditions. The tree which sways in the wind moderates the wind somewhat by giving with it. A Self-determinative response on the part of an organization produces an Extensive effect on the environment. That is to say, it affects it considerably and makes large altera-

tions in its conditions. The horse which responds dynamically to stable mate, flies, and a new master exerts considerable effect upon these factors.

The Conservative effect on the environment is that of resistance; whereas the Adjustive and the Extensive are those of cooperation. The first is blind; the second and third progressively perceptive. The area of available environment becomes wider with each of the three types of effect.

III. THE DIRECTION OF STRUCTURE AND FUNCTION

The terms, rules and kinds of organization required for the analysis of structure and function, have been set forth. They have been set forth in tables and classifications, which attempt to show their interrelations. But the larger interrelations of structure and function have only been casually introduced. In this section we hope to show these interrelations by setting forth how function serves as the aim or end of structure.

This essay has proved to be a very abstract one. It does not study empirical fields of organization but rather that abstraction of organization which the empirical fields have in common. All conditions examined are ideal conditions, not in the sense that they consist of thoughts, but in the sense that they consist of abstractions existing as perfect logical possibilities. In order to make this more understandable, we shall abstract further from these abstractions to that ideal of organization toward which all actual organizations tend.

It is hoped that the essay as a whole can then serve as a canon for the examination of actual organizations in the various empirical scientific fields, and also for an examination of the work which has been done in the specific sciences.

(1) *Relation of Statics to Dynamics.* In order to relate statics to dynamics, it will be necessary to show the relations between Rules and Kinds of Organization on the one hand and Rules and Kinds of Interaction on the other. It might be expected that we should also be able to relate the Elements of Relations with the Elements of Interaction. But of course it does not follow that because items combine in a related way that items themselves

resemble each other. The parts of a structure do not necessarily resemble the different ways in which the structure functions. The atoms of the water molecule in no wise resemble the uses to which water can be put. Let us then pass on to the comparison of (α) Rules and (β) Kinds.

(α) Rules. *Static Rule 1:* Structure is the sharing of subparts between parts. *Dynamic Rule 2:* In every action there is a sharing and an interchange.

The sharing which constitutes the structure is from the point of view of the whole represented by the sharing which constitutes the function. The spongy structure of the lungs of the animal which share blood with other organs also enable the lungs to share and interchange gases with the atmospheric environment.

Static Rule 2: Organization is the one controlling order of structure. *Dynamic Rule 1:* Every organization elects some other organization or organizations.

Just as the organization is defined by one pervasive order which holds together the parts as one structure, so the whole in its election for other wholes functions as an order which holds together the parts. Thus action or function as a whole constitutes the controlling order of structures. A bottle is defined in its relation to its parts as a structure by the way in which it acts as a container of liquid for purposes beyond it. Thus the employment of bottles as storage containers for liquid dominates the structure of the bottle itself just as much as do the particles of glass which go to make it up.

Static Rule 3: One more level is needed to constitute an organization than is contained in its parts and subparts. *Dynamic Rule 4:* Available environment is limited by interaction with organization.

Subparts, parts and wholes are the three levels necessary to constitute an organization. But a whole is delimited by the available environment, through its capability of interaction with it. The relation between parts and available environment defines the whole, or, whole is defined by function. Just as available environment is limited by interaction with organization, part is limited by interaction with whole, and subpart by interaction with part. A tide

limits its water-content and is limited by the interaction of the water with the mass of the moon.

Static Rule 4: In every organization there must be a serial relation. *Dynamic Rule 5:* All organizations strive toward equilibrium.

In every serial relation there is an element of asymmetry which is reduced to order by transitivity and connexity. Since no organization is ever in complete equilibrium, the striving toward equilibrium is the equivalent of the reduction of asymmetry to order in seriality. In the human organism there are innumerable asymmetrical relations; for instance the relations of the left foot to the right, the heart to the kidneys, the blood to the blood vessels, which are resolved into more or less order. Nevertheless, they cannot be resolved entirely, and the effort to resolve them is the struggle for equilibrium within an environment.

Static Rule 5: All parts are shared parts. *Dynamic Rule 6:* Saturated organizations remain unchanged.

In the perfect organization there are no parts which are not shared. This means that all subparts must be taken up or connected by other parts and that there can be no unshared parts which require anything from the available environment. But this is the condition of saturation. Thus, no unshared parts means—no change. In argon there are no unshared electrons and thus the gas is inert.

Static Rule 6: Things in an organization which are related to parts of the organization are themselves parts of the organization. *Dynamic Rule 3:* All action is occasioned by the available environment.

Things in the available environment which can be related to parts in an organization tend to be taken in by the organization to become themselves parts of the organization. But by being available to the organization, these things stimulate the organization to take them in. The sight and the smell of food stimulates the animal to incorporate the food into its own organization.

Static Rule 7: Things in an organization which are related to related parts of the organization are themselves parts of the organization. *Dynamic Rules 7, 8:* Insufficient and superfluous organizations tend to change. Flexibility is a condition of growth.

Obviously, Static Rule 7 is only an extension of Static Rule 6,

whereas Dynamic Rules 7 and 8 appear to differ from Dynamic Rule 3, which was correlated with Static Rule 6, above. But if Dynamic Rules 7 and 8 be restated in the language of Dynamic Rule 3, this seeming disparity is dissipated. Action is occasioned by the available environment only in the case of Insufficient and Superfluous organizations. To act in response to the available environment, an organization must be able to grow. Such an organization which is capable of interaction is flexible.

The requirement of things in the available environment by parts of an organization is not limited to single parts but pervades the organization in the sense that related parts require what single parts do not, so that the complexity of parts increases the requirements. Thus the ability to form relations is a condition of growth. Those organizations in which there are some parts incompletely related are the organizations which are most likely to require things from the available environment and thus to grow. The blood is a flexible affair. It must get rid of superfluous carbon dioxide, and it is insufficient in oxygen. Thus it can grow only by interacting with the available environment of the atmosphere. Neither the histone, *globin*, nor the iron compound, *haem*, require oxygen in the same proportions in which haemoglobin requires oxygen.

Static Rule 8: The number of parts and of their relations constitutes complexity. *Dynamic Rule 9:* Rigidity is a condition of maintenance.

The more complex an organization, the more difficult is its maintenance. Complexity would appear to be in inverse relation to rigidity. We have already said that flexibility is a condition of growth.[7] Now, if we regard the complexity as a result of growth or evolution from less complex organizations, it will be seen why rigidity works against complexity. The amoeba is a more rigid organism than a giraffe. By the same token, it has maintained itself longer and it is less complex.

(β) Kinds. Kinds of Organization and Kinds of Interaction are not to be simply correlated, since each one has to do with a different dimension of organization, and whole organizations must include both dimensions.

Taken from the point of view of complexity, the Adjunctive

[7] Dynamic Rule 8.

kind of organization, where the sharing of subparts is not necessary to either of the parts, is less complex than the Subjective, where the sharing of parts is necessary to one of the parts but not both, and these two types are still less complex than the Complemental, where the sharing of the parts is necessary to both of the parts. Similarly, Tenacious responses are less complex than Elastic responses, and both are less complex than Self-determinative responses. Taken from the point of view of integrality, the reverse proves to be the case: the Adjunctive kind of organization is the least integral, the Subjective more integral than the Adjunctive but less integral than the Complemental. In the case of the responses of the organization, however, it is the Tenacious which is the most integral, the Elastic which is less integral, and the Self-determinative which is still less integral. A stone is less complex than a tree, and a tree less complex than a man. But a stone is more integral than a tree, and a tree more integral than a man.

It will now be clear how the criteria of organization, complexity and integrality, relate the Kinds of Organization with the Kinds of Interaction.

(2) *The Perfect Organization:* We have related statics and dynamics, and in order to further clarify these relations, and further integrate them, it may be instructive to sketch the conditions with which a perfect organization would have to comply. Of course no such perfect organization has ever existed nor presumably can exist. But the theoretical plan of such an organization serves a very useful purpose in studying the direction of actual organizations. We can see the difficulties in the path of organization only when we know what the ideal of organization is.

Organizations do not contain within themselves and independent of their environment the urge to increase and to grow more perfect. What they do contain within themselves might be called almost the opposite of an urge. This is the tendency to retain an equilibrium forever. It is a conservative rather than a kinetic principle. But the environment in which every organization is involved will never let the organization altogether alone. It constantly stimulates and excites it by impinging upon it in more or less degree. This available environment forces the organization to make changes

or perish. It is the interaction between the conservative tendency and external disturbances which causes various changes in the organization—changes taking several directions. These directions may be termed the three dodges of the organization to escape destruction. There is of course a fourth possible result which consists in the utter destruction of the organization, but that requires no further description.

The three dodges of the organization to survive are by Tenacity, by Elasticity, and by Self-determination. Of course, the choice of these three dodges depends upon the structure of the organization itself. If the organization is too highly integrated for what it integrates, then it would tend to choose the path of Tenacity. If, on the other hand, it is so complex that it has difficulties integrating what it contains, then it would tend to choose the path of Self-determination. By choosing what it needs from the environment, and so increasing its complexity in order to obtain better integration, it chooses the path of Self-determination, a never-ending process. Between these two extremes lies Elasticity, the compromise between integrality and complexity. Elasticity is not so integral that it cannot increase its complexity and not so complex that it cannot hold onto its integrality.

In order to illustrate the three dodges of the organization in response to the stimulus of the environment, we may take three examples which exist in the same general environment. The three examples are: a rock, some kelp, and a porpoise, and the environment is the ocean. The rock neither gives nor interacts with the ocean any more than can be helped. Water wears it away and it does nothing to build itself back, and thus it relies merely upon its integrality to continue its existence. The rock therefore has taken the Tenacious dodge. Although the kelp to some extent resists outside influences as does the rock, and although it is to some extent Self-determinative, it relies mainly on its elasticity to preserve its integrality. It allows itself to give and to yield to the conformations imposed upon it by the tides, the currents, etc., but it yet manages to interact with the ocean in such a manner as to preserve itself. It has taken the dodge of Elasticity. Finally there is the porpoise which is able to control to a great extent its inter-

actions with the medium in which it is bathed. It can go after food or not, it can swim against tide and current, it has an extra-survival margin, *i.e.*, its time and energy are not altogether exhausted in maintaining its existence. It has taken the dodge of Self-determination.

The dodges of Tenacity and Elasticity may seem to be at least as good as that of Self-determination, in so far as mere continuance of existence is concerned. Indeed they may be better. But in terms of the perfect organization they have settled the problem of integrality at too low a level; they have compromised too soon. They have therefore no chance of ever becoming perfect. They can never grow in complexity, and so their integrality has too little to integrate. Self-determination on the other hand is a dodge which seems indefinitely capable of improvement, and this dodge alone gives the opportunity for working toward the ideal.

However, the Self-determinative organization, by its very ability to grow, has to sacrifice a large amount of its integrality. Whereas a perfect organization would have complete integrality as well as complete complexity. Since complete integrality and complexity would mean that the perfect organization would contain everything and organize that everything completely, it is of course an ideal and not an actual thing; that is, its existence is infinitely remote.

Let us examine, then, the meaning of perfection in connection with organization. What would be the conditions for a perfect organization? Of course the first conditions stated above, that of perfect integrality and complexity, would mean an infinitely complex organization having no environment. Logically, this rules out dynamics, which is based upon the interaction of the organization with the environment. We shall have to choose the relations of the perfect organization from among those categories which have already been set up under statics.

The perfect organization is a whole containing an infinite number of parts and subparts and sub-subparts, etc., all completely organized. Since the final whole cannot by definition be related to anything else, its elements of relations are all negative; it is intransitive, non-connected, symmetrical, non-serial, non-correlative,

non-commutative, non-associative, non-distributive, non-additive, non-multiplicative, and independent. It contains all positive relations; all transitivity, all connexity, all asymmetry, all seriality, all correlation, all commutation, all association, all distribution, all addition, all multiplication, and all dependence. In this connection it may be noted that each actual organization must contain some (but not all) of the elements of relations of which the perfect organization contains all.

The perfect organization is Complemental, since all other kinds or organization are incompletely integrated and therefore leave something to be desired.

We have stated that by definition the perfect organization has no environment and cannot interact. This renders the dynamic categories inapplicable, yet it may be of some interest to see how the dynamic categories are nullified when applied to the perfect organization. Referring to our Elements of Interaction,[8] in 1. organization is everything, environment nothing; in 2. there is neither action nor reaction; in 3. there is no availability and hence virtual indifference becomes absolute indifference; in 4. the equilibrium is perfect; in 5. the saturation is complete, thus ruling out insufficiency and superfluity; in 6. it is as true to say of the perfect organization that it is flexible as to say that it is rigid; in 7. stability is absolute, since integrality is perfect.

The picture which we have drawn of a perfect organization is of course intended to be merely a suggestive one. Actually, there is no such organization known, and, due to the inherent limitations of the nature of knowledge, no such organization is likely to become known in the future. The purpose in setting up the conditions for such an organization is only to indicate the direction which actual organizations must take when they respond positively to stimuli from the environment. The diagram of the perfect organization exhibits the difficulties which every actual organization encounters in reconciling the demand for integrality with the corresponding stimulation toward complexity. So far as can be imagined, such a resolution will always be a compromise, more or less satisfactory and never altogether permanent.

[8] P. 28.

We hope to have established a canon for the structure and function of organization abstracted from any and every empirical field and science. It will remain for further research to apply this canon to the empirical fields which the sciences study, and to the abstract sciences themselves.

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A CONTRIBUTION TO THE PROBLEM OF IMMORTALITY. II

IN THE July 1944 issue of this REVIEW I argued in defense of immortality on the ground that consciousness is a field phenomenon rather than something comparable to a center of force. This seems to imply that consciousness, or 'I', is a manner rather than a matter—using a grammatical analogy, an adverb, not a noun. If this is true, I argued, immortality is an assured, even though highly distressing, prospect. For this 'manner' is strictly identical in my own comfortable existence with that in the experiences of one who is about to die in the interrogation room of the German Gestapo. In both instances it is empirically I myself; and I am bound to last through all the bliss and misery of this world, as long as it exists.

This is probably not as novel as it may seem at the first glance. The words are new, but the idea is old. But, as we hear from a highly respectable American theologian who wrote on this subject some thirty odd years ago, "The argument for immortality is always changing, because we are living in a growing world. The argument of Socrates recorded in the Phaedo will not satisfy the minds of men living now. We are citizens of a changed world. The old argument must be worked into an up-to-date form."[1] What I think is important, and perhaps somewhat new, in my briefly outlined theory of adverbial existence, is that it makes no claim to metaphysical speculation. Thus far, my discussion of immortality was maintained on a strictly terrestrial ground. I think it can be endorsed by any irreligious agnostic, by any reasonable behaviorist, or even materialist.

But in this paper I am prepared to take a plunge into low and unashamed metaphysics. Contrary not only to the major philosophical and 'scientific' tradition of modern times, but to the dominant trend of our entire civilization, I wish to re-affirm the existence of the 'other world'. It must be noted from the very beginning, however, that the reasons for this queer and quaint assertion have nothing to do with the recent revival of spiritualistic studies in mental telepathy, or any desire 'to save religion'. Whatever

[1] Ch. E. Jefferson, *Why We Believe in the Life after Death* 22-27.

information is obtained by fraud or self-deception in the long disputed field of spiritualism is utterly distasteful to me, and I would be reluctant to give it even a dishonorable mention, had it not been generally taken for granted that the sole possible *verification* of immortality is *ghosts*. I only regret the inevitable ambiguity of my position which compels me to travel in the same train with people who believe in zombies and vampires, and who might easily take an unfair advantage of my arguments in support of their obstinate tales.

To deliver myself from those plausible suspicions I wish clearly to announce that, even though there might be a slender chance for finding some evidence for the existence of zombies; and even though under some circumstances, when left alone in a graveyard at night, I myself might act as if the existence of such creatures is almost a certainty to me; nevertheless, philosophically, I am not interested in such possibilities, and hostile to any serious discussion of those otherwise entertaining matters. My defense of the 'other world' will not be based on any spiritualistic evidence. On what, then, is it based?

With us moderns the question of method is paramount. What is your evidence? What kind of proof is deemed convincing to you? What procedure do you suggest to verify your assertions? Sometimes it seems to me that our keenest minds are losing interest in everything except their own operations. They remind me of a little boy who is given a new costume; he carefully examines every single piece of his new garment, every plume of his good looking hat, and then sits down and does nothing. It has become a vice, almost a philosophical disease, to divert attention from the real issue, from innumerable issues that are facing and threatening us today, to the way and manner those issues affect our precious Ego. Religion? No! He who ventures to enter upon the quests of religion is immediately suspected of bigotry and superstition. The only legitimate territory for the philosopher who does not wish to ruin his professional reputation is the psychology of religious beliefs. Immortality? Oh, shame! The origin of the belief in immortality lies in the earliest animistic superstitions of the human race, when spirits and dreams were unconfined—the customary 'scientific' incantations of origins and developments, as though

the validity of an idea is forever compromised by its lowly origin. Is it the aristocratic instinct in us? Chemistry originated from alchemy: is that an argument against chemistry?

I do not wish to write a history of the belief in the other world, even though it is a fascinating theme. It is not my intention to discuss the *motives* for such a belief, either. My purpose in this paper is to discuss and to support that belief itself as a necessary and, I think, sufficient condition for the further belief in immortality. My method is not empirical. I do not have to see a ghost to be reasonably convinced of the existence of the other world. I derive this conviction from analysing the structure of *this* world, which does not seem to make sense without assuming the existence of the *other*. If you wish a name for it, could it not be called a method of extrapolation? The term is too fashionable to be expedient, but for the lack of a better one it may stand.

In the course of this discussion several arguments will be adduced in support of the above contention. Any single argument in isolation may carry but little weight; but the cumulative effect of many may render the existence of the other world at least probable.

I shall commence with an argument which to my way of thinking is no argument at all, but is frequently used by pragmatists and relativists with its negative implications stressed. I can see no reason why it should not be reversed. The argument is based on the fundamental relativity of cultural values. Our very positive and presumably scientific conviction that *this* world of matter and mind is the only existing universe; this conviction, I say, is nothing more than a cultural faith characteristic of our time and our civilization. Other civilizations lived under equally unimpeachable and sanguine confidence that *this* is not the only reality. Was it just a superstition? To point out against Dante that in his real environment there was not, and could not possibly be, such a thing as the other world, would mean presumptuously and redundantly to make *our* behavioral environment absolute, to presume to have solved the whole question in advance, and to compel Dante to live in our 'scientific' world. It is possible that a great part of our 'scientific' world belongs to our behavioral, and not to our real, environment.

In the evolution of our scientific attitude art played a much more important part than science and philosophy. The man who was

responsible for destroying the whole mediaeval attitude of other-worldliness; the man who completely reversed the scale of values and terrestrialized our life; who introduced new axioms of living, and stabbed at the very nerve center of the holy Catholic civilization, was not Galileo Galilei, or Newton, or even Martin Luther, but Shakespeare. He is the first utilitarian, the first pragmatist, the first complete edition of modern 'humanities'. Quite firmly, with critical deliberation and a good amount of healthy dogmatism, he lives in *this* world, and only in *this* world. The other world, the supernatural, does not seem to exist for him except, like the witches in Macbeth or the king's ghost in Hamlet, as a symbolic part of human nature and human destiny—superstitiously, not supernaturally. He anticipates Newton's *hypotheses non fingo* by quite bluntly and, for the time obstreporously, announcing that he "speaks from certainties".

Through Shakespeare this worldly attitude has penetrated and become firmly established in our life. It is not through odious learning and philosophical argumentation, but through the medium of smiling play, that he disseminates his attitude. His characters are completely taken by the affairs of this world, for good and for evil. They seem to take axiomatically for granted that these affairs are the only ones in which man can and ought to be legitimately interested; in fact, the only ones which legitimately define the very nature of what we call 'interest'. The idea that 'value' is a subjective matter, by definition depending on the 'interest' behind, is a mere corollary to that attitude. What is worth striving for is determined by the existence of the strife. Only the concrete and individual life-situations, human pleasures and pains, tell us what is valuable and what is not. Everything else is imagination, childishness, superstition. The idea of the greatest happiness of the greatest number, the belief in 'progress', in 'utopias', in 'communism' and 'democracy'—these are grand intellectual side-shows, further manifestations of that fundamental Shakespearean attitude of this-worldliness; fragments of his great mind which have become axioms with us, his epigons.

If, now, the pragmatist or economic materialist will tell me that there is a whole machinery of cultural habits and economic interests which make one resuscitate such relics as the idea of the

other world, I feel entitled to tell him that his refusal to see any good, or truth, in such resuscitation, and his own smug contentment within the limits of 'scientific' faith are equally a matter of cultural, intellectual, and possibly economic, habits. Any vision of truth, however trivial or great, is psychologically, historically, and economically conditioned.[1a] In neither case does the fact of conditioning have anything to do with the truth of the argument but only with its vision.

My next step is to give at least a tentative and preliminary definition of the 'other world'.

We speak of the 'other side of the moon'; and we know what is meant by that expression, even though we can never see the other side of the moon. We also speak of the 'other side of the medal'; and even though this expression is usually employed metaphorically, we still feel that it is fairly clear what is meant by the metaphor. Would the expression 'the other side of consciousness' be entirely unclear to the reader? Let me try to make it a little more precise.

The naturalist holds that consciousness, or mind if you wish, is a product of nature. Undoubtedly it is. It does not come into the world ready made from some divine sphere, blown into the body of man by a guardian angel at the moment of birth. It comes through natural, presumably material, agencies. Consciousness, we are informed by science, is aroused by messages which are transmitted through the nerves from the sense organs to the central nervous system, the cortex of the brain. I remember the famous Cabanis' statement, and the impression it produced on me when I was seventeen and nihilistic; "the brain secretes thought as the liver secretes bile". I was hoping some day to be the scientist who would be the first to collect it in a test-tube. My hopes were soon frustrated when I learned that the brain cells were not arranged in the usual manner of a secreting gland. Nevertheless, it would be foolish, in view of those radical statements and extravagant hopes of a crudely materialistic age, to deny the modest truth of modern physiology and physiological psychology. Following the path

[1a] Comp. Karl Mannheim, Ideologie und Utopie. Also, V. G. Hinshaw, Jr., "The epistemological relevance of Mannheim's sociology of knowledge"; Journal of Phil., Feb. 4, 1943.

cleared by the observations of Galvani and Volta, electro-physiology has rendered indisputably clear the fact that electricity is an important factor in the physiological *preparation* of sensations, and of consciousness at large. Owing to the work of Sherrington, Keith Lucas, and Adrian, we now know what the nerve fibre can do as a means of communication, and what it cannot do; what sort of information a sense organ can transmit to the brain, and in what form the message must be sent. But with all this indeed stupendous knowledge of details we are not brought a single step nearer to the solution of the problem as to how this medley of physiological conditions is transformed into even the simplest form of consciousness, sensation. This is frankly admitted by those (rare) experimentalists, such as Professor E. D. Adrian, who are philosophically equipped to see the difficulty.[2] We do not know what matter does to produce consciousness. We do not know what matter is. It is merely a name indicating one of those methodological gaps in *this* world which points in the direction of the *other*.

To clear up this 'otherness' (as the reader remembers, we have tentatively defined it as the 'other side of consciousness') I would like to make use of a rather trivial analogy. Watching a moving picture we are aware of a human drama taking place on the screen. Obviously, the drama is a function of the organizing agency of the mind. What is physically going on in the room between the camera and the stage is quite different from, and has no resemblance to, the figures and things we imagine to exist on the screen. What is going on in the audience can be symbolized mathematically by electro-magnetic equations utterly incomprehensible to those who watch the play; or can be less accurately described as an endless sequence of waves of various frequencies, and particles flying around in all directions. Those are like two different worlds (may be they are, too!): *this* world of human relations as 'seen' on the screen, and the *other* world of waves and particles as represented by mathematical equations.

[2] E. D. Adrian, *The Basis of Sensation* 113: "We must admit that our sensations are facts to be reckoned with, and that they are facts of such a kind that it is very odd that they should be 'caused' by physical and chemical changes in the brain. Perhaps some drastic revision of our system of knowledge will explain how a pattern of nervous impulses can cause a thought. . . . If such a revision is made I can only hope that I may be able to understand it."

Similarly, consciousness is a sort of a projection of deep material events into human situations, dramas, personalities—in other words, the whole domain of the mind. But the analogy breaks down. The transformation of the vibrations in the audience into the picture is mathematically intelligible in the sense that, if we knew every function and every constant involved in the transmission of the light waves from the camera to the screen, we would be able to predict what kind of a picture will appear on the screen. Whereas the 'material' events preceding and determining consciousness are transformed in a manner unknown, and perhaps mathematically unknowable, to us. But precisely the point where the analogy breaks down becomes, upon reflection, most illuminating.[3] For, *if* the transformation is "of such a kind that it is very odd", as Professor Adrian puts it in the above quotation, that it should be "caused" by physical and chemical changes; *if* the transformation is essentially non-mathematical; *if*, in other words, physical and chemical factors cannot fully explain it (because physical and chemical explanation breaks down if the problem cannot be mathematically expressed)—does not this mean that the factors involved in the situation are not entirely material? For 'matter' is mechanism; and mechanism is a mathematically predictable affair. If physiology cannot entirely explain the transformation (not temporarily, but as a matter of principle), that transformation is not entirely physiological. If physics cannot explain it, it is not entirely physical. If, in the last analysis, matter fails to account for it, it is not entirely material.

Now, in terms of the above analogy, let us call the conditions preparatory to the formation of consciousness the 'antechamber' of the mind. The scientist as a rule believes that this antechamber consists entirely and exclusively of physico-chemical factors. But let us tentatively assume that it does not entirely consist of physico-chemical factors; that things are functioning there *with the view* of producing the specific biological and human situations which we call 'evolution' and 'history'; that the antechamber is neither 'empty' nor 'blind'; that it is a domain of order subject to some kind of intelligent, or superintelligent, control. Then I say: the

[3] Something for the logicians to note: Every analogy becomes valid at the point where it breaks down.

antechamber, or the 'other side of consciousness', constitutes a branch of the 'other world'.

It is customary in higher mathematics to distinguish between definitions and proofs of the existence of the objects as defined. For instance, 'integrals' are defined in a certain way; but the mathematician is not satisfied with that; he is at great pains to prove the existence of integrals, and this leads him to the theory of definite integrals which, after all, is the most important part of integral calculus. I wish the reader clearly to understand that the preceding discussion is not intended to furnish a 'proof of the existence' of the other world. It is to be taken merely as a definition. I did not say that the 'antechamber' of consciousness is filled with supernatural forces. I only said that in so far as it could at least be imagined to contain factors and agencies which go beyond the capacity of physics and chemistry to understand, I call it a branch of the 'other world'. It may be an idle idea. But at least, I think, it is now clear what I mean by this combination of words.

But if it is a relevant definition, it ought to contain at least a germ of its existence, or—to be more precise—at least a hint as to how to proceed about proving the existence of its *ens intentionale*. In fact, such a hint has already been indicated. It is analogous to what in mathematics is known as 'negative proof'; for instance, a proof that it is impossible to square a circle, or to construct a *perpetuum mobile*. Once it is admitted and clearly understood that consciousness cannot be mechanically accounted for (not temporarily, I repeat, because of the inadequacy of our information, but as a matter of principle, because consciousness is incommeasurable with mechanical laws), half of the problem appears to be solved. The 'other side of consciousness', then, if it exists at all, *must* contain non-mechanical agencies. It is not at all necessary that those 'agencies' be compared to angels, or demons, or a host of departed souls. My chief intention in the above analogy with cinematographic projection was to demonstrate the futility of any comparison whatsoever at this crucial point. Just as the picture on the screen is in no way comparable to the pattern of flying electrons in the room, similarly what is going on in the antechamber of consciousness cannot be compared to the life of mind as it is given to us in experience. And just as the picture has its origin

in the camera which all the time sustains the dramatic action, similarly what is on the 'other side of consciousness' generates consciousness and sustains its action without resembling its apparent forms.

A transition to the intended proof, or rather argument in favor of, immortality can be effected by noting that consciousness, as an organizing principle which in its higher stages of evolution takes the form of highly individualized careers, personalities, or 'souls', has its existence in both realms. If our fundamental analogy is valid, the last stages of every such career, which we call 'death', consists merely of removing the screen, which removal does not necessarily destroy the continuity of events or, if there are no events there, the individualized structure of eternity in the 'antechamber'. Every individualized career is in *this* world completed only at the moment of death. But it is in preparation at every moment of our lives; because at every moment our consciousness has its 'other side'. In this sense, *we are dead all the time.*

In the beginning of his *Meaning of History* N. Berdyayev startles and electrifies the modern reader by bluntly asserting that "our history begins in Heaven". The phrase is conceived in the strictly conservative sense of the Nicene Creed. But it is capable of perfectly literal interpretation (to which Berdyayev would, no doubt, object). For, on purely empirical and scientific grounds, we now believe that there must be a continuous chain of events which leads the cosmic evolution from a burning star to the history of Man. In theological language it has been variously expressed by saying that Uranus (heaven) united himself with Gaea (earth) thus producing Cronus (time, evolution, history), or—in Christian terminology—that God descended upon the Earth. The invariant meaning of both scientific and theological terminology is that 'heaven' becomes 'earth'; that life literally *descends* from heaven. What was 'heaven' (astronomically) a thousand years ago has now become 'earth', sustaining life.

This means—or does it not?—that each star has a *destiny,* that its burning matter *is so constructed as to make life, consciousness, and history possible.* In other words, remaining on a strictly materialistic foundation, we cannot deny that our burning star, even though it may often be thought of as a mere machine, is, in full

truth, specifically adapted to produce, or at least to prepare the ground for producing, life, mind, and spiritual values. It *provides* an inexhaustible network of axiological paths, innumerable ways for values to arise. In this sense, it is *providential.*

In using the word 'providential' I wish to be as noncommittal as possible. If we strictly adhere to the above rigorous sense of the word, very little is gained by the argument to satisfy the theologian. The remarkable propensity of stars to a certain kind of future is not a sufficient reason for assuming the existence of an intelligent designer of such mechanisms. But the fact remains that in its early stages the mechanism of the universe works, not only as though (*als ob*) it had in view the production of higher values, but actually it works toward those values. Positively, and not merely *als ob,* it is so constructed as to make a very specific kind of future possible. The burning star is pregnant with relations which lead to life, and mind, and history of man—of man as a cosmic entity, as *the* bearer of values, not merely as a two-legged creature without wings, the collateral descendent of monkeys, which is a purely terrestrial, biological accident. In other words, the stars contain a factor, or a set of factors, which enable life and values to arise. Let us call it *factor-D.*

Thus not only consciousness, but matter itself may be said to have the 'other side'. Factor-D is extra-stellar; because it obviously does not depend upon any specific movements of the atoms of any particular star. Presumably every star under favorable circumstances is capable of producing 'history' out of any configuration or pattern of the motion of its particles. That means that all mechanical patterns of motion are invariant with regard to the stars' capacity to 'historize'. It is the structure of matter as such (you see, I am willing to remain on a strictly materialistic ground) which brings about the transformation of Heaven into Earth. And that structure, judging by the evidence of spectral analysis, is not confined to any particular star. It is hidden in the infinitesimal depths of atomic nuclei—perhaps a mere consequence of the space-time differential.

Moreover—I think, *a fortiori*—our factor-D (in full agreement with Christian theology) must be regarded as ultra-mundane. For,

if the emergence of life does not depend upon the local conditions of motion prevailing on a given planet, still less does it depend upon mechanical conditions prevailing on other stars and planets. Neither the mechanical configuration nor the organic structure of matter are seriously affected or disturbed by distant events. What happens here on the Earth is supremely indifferent to anything that happens in the nebula of Andromeda. And even the moon shone with the same equanimity and indifference through the prison bars of the holy inquisition, as it now shines upon the peaceful campus of Stanford University. The process of 'historization' of matter is allowed to proceed in airtight globes from which all external disturbances are carefully, and almost providentially, excluded. I, therefore, conclude that the factor-D, thus independent of both local and remote mechanical conditions, must be regarded as ultra-mundane. This excludes pantheism.

Another argument is based on the concept of freedom, which is here defined not as 'chance' or 'indeterminism', but as a specific kind of determination in which my 'will', or 'action', or 'behavior', is determined, not in retrospection by antecedent causes, but in anticipation by something that cannot be regarded as a 'cause' of anything, such as the truth of a proposition, or the harmony for a given melody, or a certain 'form', *i.e.*, a mere pattern of action carried out in defiance of even the strongest impulses. I, therefore, consider a movement, let us say of my hand, as 'free' which is carried out (*of course mechanically, for everything in 'this world' is carried out mechanically*) *with the view* toward accomplishing something which by its very definition is not a mechanical concern.[4]

Now the curious fact is that even though by anticipation we (presumably) determine the outcome of our free movements, we are not in control of the muscular and nervous mechanism which carries out those movements. In fact, the ordinary person does not know anything about that mechanism. My determination to move

[4] I am aware, of course, that this is a highly controversial matter. My argument, therefore, must be preceded by a capital IF. It will be acceptable only to those who believe in 'freedom'. But I wish to note in passing that many positivists, including Hume, repudiate the principle of causality and yet when it comes to 'freedom' they seem to be unable to understand how anything can happen without a sufficient cause.

my finger and the movement of the finger seem to be causally connected, one following directly or immediately upon the other. But this immediacy is deceiving. For the fact is that there is a complicated physiological mechanism between those two things, my wish or determination *and* the finger's motion.

What happens 'in-between' the psycho-physiologist describes somewhat like this: After my brain has translated the message brought to it by the afferent nervous fibers into the image of, say, an apple; and after that image, or its physiological equivalent, has produced an impulse to grasp the object, the brain sends out by efferent or motor fibers a small amount of energy sufficient, upon arrival at the muscular apparatus, to discharge the necessary amount of potential energy to carry out the movement as 'desired'. I am obviously not conscious of all this physiological machinery. The process does not belong to my experience, except indirectly through the study of physiology. And, moreover, the study of physiology, and all the wisdom and knowledge resulting from it, do not help me a bit in carrying out my brain's designs. One cannot teach a baby how to walk by telling him what muscles to contract, and precisely by what efferent nerves to send the message from the brain to the muscular apparatus of his legs.

Now, my simple and bashful question is this: How do my brain cells know what my intentions are? In which way, and in what sense, are they aware of my wishes, so that they carry out those wishes with a very great precision, or can even abstain from carrying them out, if some moral principles interfered? For, unless my conscious wish is entirely irrelevant to the situation; unless it is assumed that the process would have gone on in exactly the same manner, had I no awareness of it at all; that is, unless it is bluntly asserted that consciousness either does not exist at all, or is biologically utterly useless and wholly superfluous—unless, I say, one makes these highly improbable assumptions, it will remain utterly incomprehensible how atoms and electrons, in whatever whirling complexity, could carry out and execute the most subtle, and absurd, and unnatural designs of humanity.[5]

[5] The reader will find a good deal of supporting evidence for this argument in Professor Compton's *Freedom of man*.

The complete realization of this simple fact leads to such consequences as are not easy for the modern mind to endorse. When the scientist speaks about the 'wisdom' of Nature he is probably nearer to the truth than he thinks he is. He believes that he uses the word 'wisdom' only metaphorically; whereas, perhaps, it is to be taken quite literally. Nature executing our resolutions, providing a nervous and muscular mechanism for translating our intentions into actions, seems to wait for our decision; seems to act *with the view* toward furnishing a mechanism for whatever we decide upon to do (within certain limits, of course). We cannot do or accomplish anything without an appropriate mechanism carrying it out for us—a mechanism over which we have no direct control, and the mechanics of which we understand but imperfectly. This is the scientific view. But it also is the theological view. To put it in the language of theology: nothing happens without the grace of God. Freedom presupposes and postulates grace; there is no contradiction between these two categories. This, if I understand it correctly, is the Augustinian position. His God seems to say to us: "If that is what you really want to do; if that is your free decision, I will do it for you. But the responsibility rests with you. I'll only furnish the necessary means." Nature speaks, and acts, in exactly the same manner. But if Nature acts that way, she is no longer Nature. For Nature in the scientific sense *knows nothing* about my wishes and designs. She is a mere mechanism. But if she is *nothing but* mechanism, the coincidence between her blind forces and my (presumably) intelligent plans and decisions is a miracle, less probable than all the Biblical miracles taken together.

If my argument is correct, *i.e.*, if the coincidence between my intention and the material execution of my act cannot be effected by the so-called blind forces of nature, there must (again) be a factor in, or in conjunction with, matter which directs matter to follow the path of my desires and resolutions, sometimes contrary to the long nourished habits and even instincts of nature. I wish to be properly understood on this crucial point. I did not say that the act could not be executed by the blind forces of physics and chemistry; for it most certainly is being executed by them. But the coincidence between my intention (if it does exist, and has an influ-

ence upon the outcome of my act) and the mechanical execution, cannot be (I said) effected by the blind forces. And yet, even though it *cannot* be effected by the blind forces, it most certainly and obviously *is* thus effected. This is the fundamental contradiction which empirically and descriptively expresses the inconsistency of a purely naturalistic approach to human nature. The only rational solution that I can see is that the so-called material forces themselves are mere weapons in the hands of an ultramundane factor which is in some sense akin to my will. You may call this factor 'wisdom' of Nature, or cosmic intelligence, or God, or simply designate it as 'factor-D'—the truth remains that, unless one believes in the *miracle of everlasting coincidence*, the existence of this hypothetical factor becomes almost a certainty.

If the structure of *this* world be regarded as evidence of the existence of the 'other world'; if we be allowed to draw inferences from certain peculiarities and incongruities of our terrestrial existence to secure at least a reasonable probability for the mysteries of the Beyond, the disturbing fact of pain, its cosmic brutality and sore injustice, would furnish perhaps the safest argument.

Pain is explained by the biologists as an adaptation. This is an important point; but, for the lack of space, I can give it only scant consideration. A child burns his finger, and for the rest of his life avoids contact with fire. The experience of pain has effected a certain simple adjustment to the conditions of the environment. From now on the sight of flame, or even the word 'flame', calls forth the advantageous defense reaction. It becomes a conditioned reflex.

But why does the child so violently take away his finger from the flame *in the first place?* A foolish question to ask! The answer is perfectly obvious: because it hurts. But this is not the answer the biologist is determined to give. On the contrary, he insists that this commonsense reply is fundamentally wrong and unscientific. The child violently removes his hand from a hot object, because he cannot do otherwise; it is a reflex reaction. But suppose, as an idealized experiment (such imaginary experiments seem to be quite popular in physics), that the subjective factor, the sensation of pain, is eliminated from the situation, and pleasure is inserted

in its place—is it not clear that all the reflexes will have to be reversed? For what the organism is determined to avoid, that is, what controls its adjustment and constitutes its adaptation, is not an object as a physical entity, for instance a pin or a flame, but the pain caused by such objects. If one could feel quite comfortable in flames, one would seek to be burned, and modern warfare would be a paradise instead of hell.

So much for the story of 'adaptation'. But pain is not only adaptation. There is a lot of needless pain in nature; and there also seems to be an excess of the intensity of pain utterly unjustifiable on biological grounds. Is it necessary for the individual to have such a terrific capacity for pain in order to succeed in the struggle for existence? Would not a tenth, even a hundredth part of it be sufficient to frighten anyone, human or brute, and make him shun dangers? Do you remember Robinson Jeffers' cowboys playing with a hawk they shot from the mountain cloud, the wing broken? "They crucified the creature, a nail in the broken wing on the barn wall between the pink splinters of bone and a nail in the other. Its dulled, orange eyes lived all night!" Or a picture from *Thurso's Landing:* "In the morning Thurso waited two hours from sunrise; they had nothing to eat. Reave greased the joints of the truck. When one of those long grey desert lizards that run with heads raised highly, scudded through the white sand, he flung the wrench and broke its back. . . . Helen watched her husband pick up the wrench, and batter that broken life, still lifting its head at him, into the sand."

Forget for a moment your modern, scientific rationalizations, and try to think what it all means. To realize the cosmic implications of the situation it may be sufficient to remember that our tiny planet is only one of possibly many thousands, contemporary or successive, most fantastic worlds scattered around the galaxies of the Milky Way. Even if modern astronomy is right in its conclusions concerning the finite dimensions of the universe and rarity of planets in it—still, considering the enormous multitude of stars in the heavens, there must be plenty of opportunities for life to develop. And if one considers that from every world there are staring into the dark inanity of the surrounding space the 'orange

eyes' of millions and millions of needlessly crucified creatures; that on every single planet there are multitudes of the most fantastic, and most fantastically battered, 'lizards' still lifting their heads at Him—one may strangely feel that the Milky Way is losing its sweet celestial silver and acquiring the reddish tint of blood. And one will take with caution Emerson's optimistic phrase assuring us that "Nature never wears a mean appearance". If life is universal, the world must be soaked in pain. The Devil is a cosmic reality. Defining, with Kant, the word 'devil' as "evil for evil's sake", and judging, again, by the structure of this world, we may readily infer that 'he', the horned gentleman, is a potent figure in the Beyond.

One could, in a similar manner, argue from the fact of pleasure, and, even more convincingly, from the nature of goodness—according to Kant, the second greatest miracle in the universe. But for the present I must refrain from further arguments. Before I conclude, I wish briefly to consider one more problem. Why the 'other world'? Is it not, as has been so often suggested, a mere redundancy, a question-begging device to dispose of some difficulties? What is its purpose?

To this medley of questions my honest answer is that I don't know. Before answering, the questions themselves would have to be sifted and clarified; and I have no time to do that. The current religion—in our Western world usually referred to as Christianity—both helps and hinders us in forming any hypothesis about it at all. Hinders, because it offers a pseudo-certainty, called 'faith', in place of philosophical hypothesis; and also because it contains too much wishful thinking which it is considered irreverent to doubt. This must be radically changed, if our religion is to survive. But the study of religion may also help the philosopher. For in the midst of wishful thinking, pragmatic consolations, and stupendous distortions, there lies accomplished in its great archives a vast amount of real and honest thinking. One thing that our Western religion teaches us—and in this instance strangely enough *not* deviating from Jesus, as it does in the vast majority of its problems and dogmas, precious vessels of thought as they otherwise may be—is the idea that *this* world is merely instru-

mental for some purposes which lie beyond its scope. Modern theology expresses it by saying that the aim of history is beyond history. I would rather say that history is ***at every moment*** beyond itself, just as we, historical individuals, are dead all the time. History proceeds on two levels and in both worlds.

Now, if this is true, a number of current religious sentimentalities drop out by implication. If this world is merely instrumental, the other world cannot be perfect. *God* cannot be perfect. For if He needs an 'instrument' there must be difficulties. One who faces difficulties is not perfect. Perfection is a human category, not divine; a Man's dream, not God's. The doctrine of the aboriginal sin and the existence of evil both point in the direction of Manicheism, not Orthodoxy. But all this is debatable. What seems to me above debate is the fact—or is it not?—that *this* world is based on cruel strife and struggle from which humanity emerges with its tragic capacity for freedom and love in the midst of brutal indifference and injustice.[6] If, in addition, one is willing to admit that this brutal mechanical world is merely 'instrumental', converging, as it were, asymptotically toward freedom, one can see why the 'other world': it is the ultimate consumer of freedom. For, in *this* world freedom, in the above ethical sense, cannot be consummated. Its consummation is somebody's happiness, and happiness is a 'mechanism'. Hence in this world the consummation of freedom means its destruction. Nature is not meant for freedom; it is a mechanism. Freedom is our contact with the 'other world'.

Our chief quarrel with immortality is our mono-cosmism. We, the children of naturalistic civilization, cannot believe in immortality, because our naturalistic faith precludes us from believing in the reality of the other world. By a series of arguments I have tried to show that the idea, and the existence, of the other world is not nonsense. Hence the chief obstacle for our belief in immortality appears to be, at least hypothetically, removed. The idea of

[6] Think of war as a metaphysical domain for the practice of freedom against the most powerful instincts of fear and self-preservation; and of love institutionalized in the field and rear hospitals, in the profession of doctors and nurses, in the service of chaplains (always volunteered), in the combatants' mutual aid, sometimes sharing the last drop of water even with the enemy! Think of the 'celestial' aids of morphine, novocain, and even plain, vulgar alcohol!

freedom effects the transition from other-worldliness to personal immortality (of nouns, not adverbs). For freedom requires (historically) individualized careers, human, personal situations. Those careers are fully defined only at the moment of their departure from *this* world. I believe I have shown that it is very unlikely that they are completely and in every sense destroyed at the moment of their 'departure'.

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DISCUSSION

ON HARTSHORNE'S FORMULATION OF THE ONTOLOGICAL ARGUMENT: A CRITICISM

THE article by Charles Hartshorne, "The Formal Validity and Real Significance of the Ontological Argument", in your May 1944 number, contains a syllogism intended to meet the challenge that the ontological argument cannot be given formal or syllogistic statement without revealing a fallacy.

May it not be answered, in reply to Professor Hartshorne's query, "Where is the fallacy?", that one inheres in the statement of the premises where God is hypostatized, thus making the conclusion possible? That which is X is either A or B; God is X. In substituting God for "that which" or "whatever", God is assumed to be an entity, which, of course, is what the author set out to state in the conclusion.

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ON HARTSHORNE'S FORMULATION OF THE ONTOLOGICAL ARGUMENT: A REJOINDER

I THANK Mr. Elton for enabling me to clear up a misunderstanding the possibility, but not probability, of which I foresaw. It is only for the sake of brevity that the argument is so stated that it seems to substitute "God" for "whatever" and thus to assume God as an entity. The substitution is rather of the *term* God (or perfect being) for "term standing for a coherent conception". This substitution is validated by premise two. That God is an entity is not assumed, but deduced from the first two premises together. This deduction is precisely the first of the two syllogisms. Its conclusion, that God is an entity (whether a potency or an actuality being, so far, undecided), becomes then one of the two premises of the second syllogism, whose conclusion, and the conclusion of the whole argument, is by no means simply that God is an entity, or is something—for even an unactualized potency is also something. The final conclusion is that God is an *actual* entity.

The first or major premise of the double syllogism is only a way of saying that to every coherent concept there corresponds a real entity, be it a real actuality or a real potency. Hence, if the concept of perfect being is coherent (second premise) then, applying the major premise, it follows that the term "perfect being" has an object which is something, either as a real potentiality or as a real actuality. But (third premise) the object of perfect being cannot have reality

in the mode of potency (there being a contradiction in the idea of potential perfection); therefore this object is actual. I repeat, where is the fallacy?

One may dispute the premises, but it is time to realize that this is the *only* way of rationally rejecting the argument. And it will be interesting to see which premise or premises critics will choose to dispute, and if they can agree upon this. Also, as was pointed out in the article, the premises need not be offered as purely self-evident, but can themselves be derived by valid argument from other premises which, to some at least, may appear more immediately convincing.

Another criticism has been proposed. This is that the truth of the third premise, the object of the term God cannot be an unactualized potency, could not be known without previous knowledge that God, or Perfect Being is actual—the conclusion which was to be demonstrated. Thus the argument would run, God has the characteristics of actuality, self-surpassability, etc.; therefore God is actual. But on the contrary, the *modus* actuality is brought into consideration only after the *modus* potentiality has been found to *contradict* the predicate all-surpassing, or perfect. He who disputes this incompatibility should attempt to show what theory of *real* potentiality would give consistent meaning to "potential existence of the perfect". We immediately get into such absurdities as "imperfect cause of a conceivable perfect result"; or "possible generation of an ungenerated being", or "possible transition from non-existence to eternal existence". These absurdities are not known to be such from an assumption of actuality as part of the definition of perfection, but are recognizable so long as *any* of the characteristics of perfection are held in mind, such as independence, eternality, ideal knowledge, ideal power, etc. Actuality has to be admitted *if* these characteristics are to be consistently conceived (on the assumption of the major premise that actuality is the only alternative, given a coherent conception, to real potentiality). I am not surprised that the critic just spoken of makes no effort to show how he would conceive "potentiality of perfection". For we have gotten into the habit of applying more severe standards to arguments for God than to refutations of these arguments, and this bias can even be found in the writings of those who believe in God. I hold that the classic refutations all depend upon the detection of errors which, in the more or less primitive state of logic (and also, whatever some say, of ethical and religious feeling) at the time the great theologies were worked out, inevitably crept into the classical proofs. But the question before us is not whether these proofs were sound. The question is, do the errors inhere in the very notion of a proof from the idea of perfection, or again, of a proof from the contingency of the world, *or* do they

inhere in certain special features which these proofs assumed at the hands of our ancestors? Show me any refutation of a classical proof and I will show a possible way to formulate that proof which will render the refutation invalid. To be sure, the conclusion of the proof has to be reformulated as well as the proof. "Perfection" has not altogether the same meaning in the unrefuted version. But neither does it mean what used to be defined as "imperfection". And there is reason to think it means something more, rather than less, relevant to religious sentiment and action than the classical idea of an immutable absolute, essentially unrelated to anything but itself.

Men are lazy and they expect the future to repeat the past. They will not easily admit that philosophical theology is entering upon a new era of logical correctness which renders the older discussions of little more than antiquarian interest. It must all be done over again, both proofs and criticisms of proofs.

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ARE VALUE JUDGMENTS UNSCIENTIFIC?

THE answer to this question depends upon the answer to two questions preliminary to it, namely what both science and value mean.

As to the meaning of *science*, nothing can be said against the terminological restriction of the word to that kind of knowledge which fulfils certain requirements of method. It refers to those experiences which are verifiable by and subject to the control of nearly everybody through experiments, measurements, statistics, etc. But in so limiting it we must keep in mind that we have not annihilated a much wider meaning of knowledge and experience which includes the possibility of admitting the existence of objects which by their very nature resist every attempt at being subjected to those methodological requirements. That something exists and is recognizable does not depend upon the possibility of grasping it by means of one definite preconceived method. On the contrary, in the history of Mind numerous instances appear when various methods of knowledge have been disproved because they were unable to make accessible certain fields of real objects.

As to the meaning of *value*, we must be careful to avoid confusing the factual meaning of value judgments and a meaning which is frequently attributed to them in accordance with a point of view that is generally accepted in our age without examination or criticism. According to this prevalent view values are nothing but what we,

as individuals or as groups, like; and value judgments are merely the verbal expressions of such liking.

In dealing with this common misconception, it must be noted that verbal expressions of mere liking do exist, but that these differ completely from value judgments. The sentence "I like coffee" is fundamentally different from sentences like "Slavery violates human dignity" or "Justice ought to be". If one tries to transform these sentences into "I do not like slavery because it violates human dignity and because I like the latter", or "I like it that justice triumphs", it becomes evident that the meaning of these sentences has been changed—and not their verbal expression only. But such an argument is not very convincing, for our way of speaking expresses merely our way of thinking, and it may be that we are the victims of self-deception in our thought. That such a mode of thinking is naive seems to be beyond dispute when the following considerations are made: If no reality is accessible to our knowledge except through specific acts of experience, then how can we be sure that anything exists by itself even when we do not experience it? And if we have no assurance here, has it any sense to attribute objective reality to anything independent of our knowledge or our experience of it? And lastly, since every value-experience implies an act of liking, does this analysis not prove that value experience and liking are identical?

Simple observation disproves such an assertion. It is quite possible to experience a value and dislike it at the same time. I dislike the pictures of Rubens in spite of the fact that I am aware of their artistic beauty. Furthermore it is more consistent with experience and logic to see in values the sufficient cause of our liking rather than our liking being the cause of the values. Normally one likes something because it is objectively a value and only erroneously do we confuse objective values with the objects of some one's liking. If values were merely the expressions of our liking it would not make sense to ask whether some values deserve our liking; but we do ask this constantly.

With respect to the basic argument of epistemological idealism, namely the insistence upon the impossibility of verifying the knowledge of anything except through more knowledge, it is clear that this is nothing but a tautology. If that selfevident necessity is used to prove that nothing can exist independent of its being experienced, then a selfcontradictory postulate is implied, namely that it would have sense to speak of objective reality only if one were able to get knowledge or experience of it—without getting knowledge or experience of it!

But all this does not convince the subjectivists and relativists. They

simply refer to the obvious facts of radical disagreement in evaluation among peoples, ages, and individuals. But here, too, closer observation may prove that such disagreements concern the surface only. If value judgments are not confused with sheer doctrinary opinions, then it will be found that values like honesty, integrity, courage, frankness, magnanimity, kindness, gratitude, freedom, justice are approved everywhere.[1] What actually does vary, in fact and not by perverse misinterpretation, is the form or appearance which identical values must take under different conditions of their realization.

Even should the opponent of the objective reality of values be convinced by these arguments, he will never give up. Why not? Because he makes his agreement to the objective existence of values conditional on a satisfactory solution of the problem what values are if they are understood as something objectively real. And it is very difficult to give this answer. The situation is not in the least improved if the opponent is blamed for committing a methodological error. He may be told that the problems "What is value?" and "Have values an objective existence?" are different, and that unprejudiced thinking should approve the factual experience of something even if it is not yet capable of understanding the nature of its object. He will reply: "How can I really know *that* I experience something unless I know at the same time *what* I experience?" This may be answered by pointing out that there is a difference between "factually knowing what I experience" and "explaining and understanding theoretically what I experience". The opponent may even admit this difference and nevertheless preserve his sceptical attitude, for it is incontrovertible that there is no way of grasping an objectively real thing except by apprehending it mentally. Values, however, disappear immediately when the attempt is made to grasp them as dispassionately objective. They seem to be given only while one is in a passionate mood and not in cool detachment. Hence they seem to be essentially correlated to subjectivity.[2]

However, it seems to be possible to disprove this argument also. We may attribute a cognitive function, with Pascal, to emotional acts and, with Kant, to practical ones—and the problem seems to be solved. In truth, however, by this move the difficulty is shifted to deeper strata, and not solved. We find ourselves confronted with

[1] Even the Nazis cannot afford to deny them, but they pervert their meaning and application. Notice that in their propaganda they blame their enemies for the lack of those virtues which they claim that they are fighting for themselves—Freedom and Justice!

[2] It goes without saying that, in this paper, we are not concerned with "instrumental" values, that is with things which, valueless in themselves, are called valuable because of the usefulness for something outside themselves.

Kant's problem of the *Ought*. And then even if we realize the impossibility of deriving values from a formally universal Ought-to-be and insist upon the insight that every ought-to-be presupposes a definite value giving rise to the ought, realizing that something is not a value because it ought-to-be, but that it ought-to-be because it is a value—and although we are still confronted with the problem that the ought-to-be means not only that something, not yet real, should be realized by action, but also that something real which already exists ought-to-be simply because it is good.

In spite of these objections which may be raised against Kantian derivations of value from the Ought, an essential connection does prevail between values and the ought, a connection which Plato visualized when he attributed value character to Ideas as beings which, though not real in themselves, affect reality. They direct it as its prototype; and ideas thus receive the meaning of Ideals.

According to this view values are definite ideal contents whose more or less adequate materialization in this real world renders the latter valuable. They are quiddities or qualities of value-character, and just like all the other qualities, as, for instance, sense qualities, they need a "substance" as the condition for their becoming real. This substance functions in both cases as a "carrier". The decisive point is that reality in itself is not considered as having value character and that definite ideal contents, like justice, do have value-character in and by themselves, whether materialized in the real world or not. While getting this realization the value character of ideas is diminished rather than enhanced. Likewise it should be noted that as there are positive value ideas, negative ones, like injustice, also exist, irrespective of their realization.[3]

A strange inconsistency appears at this point. It cannot be denied that the realization of positive value-ideas is obviously a value in itself, and the realization of negative value ideas is a negative value. Likewise, it cannot be denied that the disappearance of positive value ideas from the real world is a negative value, and the disappearance of negative value ideas is a positive value. Here a selfcontradiction becomes visible in every value theory which puts the value principle in ideas, for how can the achievement of reality or the loss of it affect the value-character of definite contents, if they are values—positive or negative ones—by themselves? This difficulty compels the theoretician to commit himself to definite philosophical decisions, and he is inclined to declare that the negative value-ideas are nothing but deprivations of the corresponding positive ones. In the light of this he has to define reality itself in an idealistic fashion,

[3] The most complete specification of all ideal value-contents can be found in Nicolai Hartmann's *Ethics*.

either positively as a harmony or a consistent synthesis of forms; that is as a definite form itself or negatively, as matter or darkness or lack of forms or nothing. In both cases the value character is reserved to ideas alone. But surprisingly enough, none of the great philosophers have clung to those conclusions; something in the genuine view has prevented them from doing so. Even to Plato, in spite of inconsistency with his system, the realization of ideas in the material world meant an enrichment of being and originated in the will and kindness of a perfect God. Kant, likewise, puts the value principle, beyond the synthesis of forms, in the practical realization of the moral person.

We notice, moreover, that according to nearly every metaphysician there is a striking tendency to derive value from the principle of Existence itself. I mention Plato, Aristotle, St. Augustine, Aquinas, Spinoza, Leibniz, Schelling, Hegel, Whitman, among the authors who identified value or the Good expressly with Being. There must be some foundation for such a strong and consistent claim which one might expect could easily be refuted through common daily experience: for the real world abounds with evil. Furthermore in the real world a hierarchy of values prevails which seems to contradict the identification of being real with being good. Here everything is equally real, but everything is not equally worthy. How then can preferences be explained? And yet, the experience of artists, poets, philosophers, and religious men consistently springs from a deeper intuition which corroborates the old sentence "Ens et bonum convertuntur".[4]

Parenthetically, I wish to remark that the objections against the identification of value and reality are not insurmountable. The facts of an hierarchy of values and of preferences can be explained by the ontological structure of the various beings as far as their materialization in the real world is concerned. Something, for instance an animal, is "higher" in so far as it presupposes as the prerequisite of its materialization other "lower" beings, in and through which it can live as, for instance, earth, air, water, plants, other animals. In other words, it is not an hierarchy of values that exists, but one of beings (natures, essences, quiddities).[5]

In so far as we try to describe our value experience in an un-

[4] Cf. my papers on "Walt Whitman's Intuition of Reality", *Ethics* (1942) 53 no. 1, and "On Typical Misinterpretations of the Religious and Moral Experience", *Review of Religion* (1940) no. 4. I have also dealt with this problem *in extenso* in my book *Wesen und Wert.*

[5] As to the fact of evil, the development of mind demonstrates that all evils, except the moral, are relative to a finite human point of view which is determined by biological expediency. Proportionately to the higher historic development of the human mind the field of ugliness, for instance, becomes smaller for man—at the expense of human vitality.

prejudiced way we find that it escapes every analysis which fixes our attention—as "analysis"—upon a definite content, abstracting, that is, isolating it from others. But we can grasp the value of a content when we look at it indirectly, namely as backed, born and filled by its amalgamation with other contents, an amalgamation ("con-crete" means "grown together") which gives it the character of being massive, dense, substantial: real. The intrinsic value of anything presents itself to our awareness as a particular act of triumphant self-affirmation over and through the substratum which bears, backs, and fills it.

It is this affirmative act on the part of the value-object which is often misinterpreted as an act of liking and affirmation on the part of the value-perceiving subject. It seems to me necessary that we should reestablish the genuine experience and understanding of the *ontological* meaning of the term *act* as different from its logical, psychological and physical meaning.[6]

On this basis we can understand that science, in so far as it deals solely with isolated contents and their evidently necessary, that is, rational interconnections which are verifiable only by abstract thinking, can never have access to values. It dwells in the thin air of analysis and insulation. It is art, poetry, metaphysics and religion which have an essentially comprehensive view for the irrational, amorphous substantiality of things and their "act" of self-affirmation which is represented as the intrinsic value and meaning of existence; not abstract thinking, but concrete intuition provides their proper object. The reluctance to attribute a scientific character to value judgements is, therefore, justified in so far as values can never become direct and primary objects of scientific knowledge. But it is unjustified in so far as the objective existence of values and the possibility of any other cognitive access to them is denied. Plain thinking is incapable of achieving a genuine awareness of values. Emotional acts and enthusiasm seem to be essential for a true experience of them. These conditions, however, do not prove anything against the objective validity of values, nor against the cognitive

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Moral evil, however, is the only negative which has an objective meaning. It is the risk which is necessary as the condition for the moral freedom of the spiritual person. Moral evil, on the one hand, is the omission of personal, that is, spiritual self-realization; and on the other hand, it is the absence of the creative and preserving power of spirit with regard to the realization of other beings. In both cases the negation is one of realization—that is, if value and reality are identical—of the value principle itself. Accordingly the authors mentioned above are almost all moralists and reformers instead of approvers of every human meanness and misery as the usual criticism of their view lets us expect.

[6] Unless we regain this insight, we shall never understand what "Substance" meant to the Aristotelian tradition, a meaning completely different from what modern physicalism is fighting against.

character of those emotional acts and enthusiastic attitudes which constitute value experience. And since we do not withhold scientific character from judgments whose objects are originally recognized not by the judgment itself but by the foregoing sense perception, I do not see any reason why we should withhold the scientific character from judgments whose objects are originally recognized by a specific kind of emotional acts and enthusiastic attitudes.

MAXIMILIAN BECK

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REVIEWS OF BOOKS

The Uses of Reason. By ARTHUR E. MURPHY. New York, The Macmillan Company, 1943. Pp. viii, 346.

This introduction to philosophy is both timely and competent. It philosophizes about a theme which is in the forefront of current discussion, and it does so in a manner which is enlightened and enlightening. Its language is direct and readily intelligible to the average reader with a modicum of culture, and its complicated subject-matter is handled so constructively throughout that it is a genuine contribution to the literature of the problem. Those interested in coming to grips with the fundamental issues as envisioned from a perspective which is not arbitrarily foreshortened will find it an excellent guide.

The theme of the book is the ancient and basic one of the efficacy of reason in the business of living. The thesis is that reason, untrammeled save by the consequences of its own commitments, is adequately efficacious in this important business. The argument is an analysis of reason's actual procedures and accomplishments in its various uses in the pursuit of truth, in the determination of moral values, and in the adventure of social behavior. And the analysis is essentially sound. The author would doubtless be the first to admit that it is not exhaustive; but he has the right to claim, and I venture to make the claim for him, that it is correctly oriented and, within the limitations set by his purpose, clearly and convincingly delineated. It moves everywhere under wide horizons and always with marked fidelity to factual considerations.

The fashion nowadays in discussion of this high theme is, unfortunately, the opposite of this. The usual procedure is to confine analysis within the arbitrary limits of a predetermined and truncated perspective. It is commonly taken for granted that reason's reach is shortened in one direction or another, the main point at issue supposedly being the question concerning the nature of the limiting conditions. And these are variously described. On one side, for example, appeal is made to some sort of an absolute, stipulated or ineffable, and, on another, to pride and prejudice or animal faith. In each instance the abstraction is invoked as the alternative to the others, with the result that the analysis stops short at crucial issues.

But in the analysis here presented the reader will find no such abstractions either invoked or countenanced. What he will find is a straightforward story in the light of which all such abstractions

are disclosed to be what they are. The tale is a plain but instructed one, and the moral of it is clear. The 'reason' celebrated and exhibited is not the sort which is cabined and confined by initial rules of meaningfulness and verifiablity resting on nothing more substantial than fiat, or is "the slave of the passions" and animal faith or, again, is "a fetish, enshrined in ideas and assumptions which, through habitual use, have acquired a specious self-evidence and sanctity" (8). It is, rather, the sanity which functions as the organising principle throughout the wide ramifications of ragged-edged experiences—"a thought that gains in scope and meaning from progressive application without departing from the principles that defined its primary intent, or . . . a life that is guided but not narrowed by ideals and centered in goods that do not lose their worth by being understood and shared" (339). It is, in short, the persistent and self-corrigible quest for certainty and security.

And all of this is very refreshing. It is so because of its essential sanity, because it both advocates and exhibits reason as it is when unhampered by weights that so easily beset it and permitted to run at full stretch. For reason is like that in the long run. Nor is it easy to see how a professional irrationalist, of whatever persuasion, who reads and inwardly digests the lesson thus documented, can thenceforth suppose that his foundations remain.

G. Watts Cunningham

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The Political Philosophies since 1905. Vol. II: *The Epoch of Neo-Democracy and Neo-Socialism (1929-),* II, III. By Benoy Kumar Sarkar. Lahore, Motilal Banarsidass, 1942. Pp. viii, 558, xviii; viii, 356, xii.

Sarkar is a Bengali economist, sociologist, and ardent Indian nationalist, who has undertaken to summarize, with much commentary, the political events and viewpoints of the modern world since 1905. He believes this date to be epochal in the struggle of the East against the West, since it was simultaneously the year of Japan's defeat of Russia and the first year of the *swadeshi* (native industry) movement in India. Volume I, covering the period from 1905 to 1928, was published in 1928. The two parts of the second volume which are reviewed here bring the survey up to May 1942.

The book is a most miscellaneous collection of abstracts, quotations, and short essays by the author, making no attempt to give the material philosophical organization or criticism. Its chief interest for Western readers probably lies rather in the "play ball with Japan" theme which occasionally occurs in it, and in the constellation of values and beliefs which makes Sarkar apparently hope for a

Japanese victory. He is decidedly more in sympathy with Bose than with Nehru. It is difficult to tell how many Indians share his views; he himself complains of the "change of Indian mentality against Japan" when Japan invaded China, a change which he says was "sudden, ill-advised, and certainly based upon ignorance of the situation" (Part II 365). His world-picture is, however, plausible enough and consistent enough to be at least potentially an important ingredient in the whole anti-imperialist movement of the twentieth century. It also makes an interesting case-study in the psychology of nationalism and of ideology-formation in general. The remainder of this review will therefore be devoted entirely to a description of it.

In Sarkar's value-system, the only values which seem to matter fundamentally are values for India. In that sense he is a thoroughgoing nationalist, and admits as much when he speaks of "the bankruptcy of internationalism as a socio-political cult" (II 284). For Haushofer he has only admiration: "There is no mysticism or metaphysics in Haushofer's social philosophy. In the midst of all internationalizing ideologies his geopolitics teaches the world to remain awake to the one great reality of life, namely, that it is nothing but nationalism that rules mankind . . ." (II 285). This nation-centeredness is also apparent in his uniformly hostile and suspicious characterizations of non-Indian nations and groups. The "old-established empire-holders" (*e.g.*, England) are rigid, insolent, contemptuous, complacent, hypocritical, and cowardly. The Monroe Doctrine is a mask for Yankee political domination which extends to the tip of South America. Soviet Russia is "*pucca* imperialist and chauvinist" (III 324). Even Germany and Japan, the "virile and young powers" toward whom Sarkar looks for a breaking of the stranglehold of the old imperialisms, are considered just as imperialist as England or America (III 323; II 283). On the other hand, though he seldom praises India and freely admits her "technocratic" backwardness, he becomes evangelical in his enthusiasm for two nineteenth-century Indian religious leaders, Ramakrishna and Vivekananda, with whose philosophy he is completely identified.

The chief values which he wants for India are independence, industrialization, unity (as opposed to the "Balkanization" which Cripps proposed), and the "world-conquering" spirit of Ramakrishna and Vivekananda. Lest any reader be startled at the conception of a world-conquering India, it should be quickly explained that this term (*digvijaya*) has a special and perhaps innocuous meaning in the philosophy of Ramakrishna and Vivekananda. It means "the new gospel of joy, hope, virility, energy and freedom for the races of men" (III 214). According to Sarkar, it is a modern expression of a spirit which is strong in Hinduism itself. "In Hinduism is to

be found the cult of power, creativity, and manhood. The *Purusha* (Man) of the *Atharva Veda* declares his ambitions to the Earth as follows: 'Mighty am I, Superior by name, upon the earth, conquering am I, all-conquering, completely conquering every region'" (III 239). In other words, it is not India which is to conquer other men, but Man who is to conquer the Earth.

Although Sarkar also proclaims his adherence to democracy and socialism (II 242, 284), freedom of conscience (II 242) and "internationalism", interpreted as "intimate friendly association with the peoples of all races" (II 253), one wonders whether his more fundamental value-system may have contributed something to his admiration for the "virile and young powers", Germany and Japan. However that may be, he has more tangible nationalistic reasons for wanting their victory. "Subject races or regions can, if at all, become independent or free if they can, along with other things, carry on intrigues with the enemies of their masters and if the former can successfully overpower the latter" (II 239). And, apparently, India has nothing to lose by doing so, since "the subject races of Asia and Africa, generally speaking, do not feel that they have anything to lose in economic life or culture if they are transferred—*even as slaves, i.e., in exactly the present political conditions*—from their Eur-American masters to Asian masters or 'protectors'". (III 314, Italics Sarkar's.)

RALPH K. WHITE

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The Humanities after the War. By Various Authors. Edited with a Preface, by NORMAN FOERSTER. Princeton, Princeton University Press, 1944. Pp. x, 95.

This collection of essays and lectures by Messrs. Gordon K. Chalmers, William MacNeile Dixon, Abraham Flexner, Theodore M. Greene, Roscoe Pound, Wendell L. Willkie and the editor is unified only by belief that the humanities are central to ideal education and by a level of writing beyond the hope of those who profess a different faith. It is best regarded as a set of testimonies, each man saying, "This the humanities or certain of them can do, I have seen it done"; it is not a planned treatment of the theme announced in the title. The testimonies have been well chosen, as one would expect of the accomplished anthologist who served as editor.

Impressive as all the statements are in varying degrees, the most memorable is MacNeile Dixon's. The successor in the Glasgow chair of English to Andrew Bradley and Walter Raleigh illustrates in the imagery, the rhythms, the general structure of his essay, as in its substance, the tradition for which he pleads. After a gloomy survey

of the society of the present, he inquires: "Where are we to look for a recognition of the values of right feeling, of taste, of delicate discernment, of quality rather than force of mind, of sensitivity and sympathy in social intercourse . . . (69)?" At least we may look to Mr. Dixon.

These are the qualities that are at the heart of the humanist discipline. Mr. Foerster rightly points out that they are rare even among professors of the humanities in our time and place; that by a catastrophic misapplication of the methods of science in areas where the essential results cannot be reached by the use of those methods, scholars and teachers in the humanities have joined hands with their enemy to discredit their subjects. Still, it is mistaken to ascribe, as he seems to do, the main blame for what has befallen us to our individual or corporate misdeeds. Society determines education; and society, exemplified in university presidents and deans, has valued in the humanities the elements which were akin to science.

From our knowledge of the past, and from our possession, if in a degree far less eminent than Mr. Dixon's, of the powers he enumerates, we may utter our Cassandra cries, and it is our duty as it is also our pleasure to do so. When we hear the believers in getting down to brass tacks, the vocational educators, saying as they do, that the humanities will survive, that there is nothing to worry about, that we shall always keep a place on the margin of education (for a smattering of our subjects is useful—helps to make contacts, unbends the tired brain), we shall tell them as Mr. Willkie told them in his Duke University address: "When such arguments gain acceptance that is the end of us as a civilized nation (2)." But what if our opponents have already ditched the ideal of civilization? They will not be impressed. This volume will not impress them. I do not offer this as a criticism of the volume, for I do not discern how any defense or exemplification of the humanities which laid its stress on the values at the centre of the humanist tradition could impress our enemies. And theirs is the power for the moment. . . .

E. K. BROWN

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Le problème du mal. By PAUL SIWEK. Rio de Janeiro, Desclée, De Brouwer et Cie., 1942. Pp. vi, 162.

Dr. Siwek, Professeur à l'Universite Gregorienne de Rome, dedicates his latest book, "*à ma patrie*". Below the dedication he places the cry of the prophet Jeremiah:

"Souvenez-vous, Seigneur, de ce qui nous est arrivé . . . Notre heritage est passé à ceux d'un autre pays, et nos maisons à des etrangers."

With World War II in full swing, Professor Siwek reminds us

that while we live in one of history's tragic hours, we must remember that man always faces the problem of evil. *"Pourquoi le Mal?"* is an ever-recurrent question. It is in fact the question at the center of all religious thought. Evil is a mystery; even God is thwarted by evil. Professor Siwek modestly disclaims any intention of solving the mystery; he intends only "to make more precise its terms and dissipate certain misunderstandings".

The first of these misundertandings is a common confusion between the nature of evil and the cause of evil. Most of the ancient thinkers, he remarks, from the Chaldeans who wrote the Zend Avesta to, and including, Plotinus, were concerned with the cause of evil. Siwek deals summarily with Plato, Aristotle and Plotinus (one of the least satisfactory parts of his book) and asserts: "It is not until arriving at the works of the Church Fathers (in particular, that of Saint Augustine) that one finds a constituent doctrine of the nature of evil." It is this problem that he proposes to treat.

While Siwek's discussion of evil is not original and suffers from failure to distinguish clearly between different kinds of evil (for example, physical pain and mental suffering are held not to be evil *per se,* and yet they are sometimes given as examples of evil) it is admirable in stating clearly a succinct theory of evil and applying this theory to a wide range of being. Evil is the frustration of immanent purpose. *Le Mal* is indeed, as Plato, Aristotle and Plotinus said, a deprivation of being; but it is not simple denial, nothingness; it is frustration of order. There is no evil where there is no immanent order, and order is immanent only in life. There are of course levels of life, closely related and yet essentially distinct. The kind of purpose which a level of life exhibits is a function of its nature. The lower levels of plant life can be said to sustain either good or evil only by imaginative projection. We can say that fertilizer is good for plants and poison is bad for leaf scale only in the sense that fertilizer helps and poison inhibits their life functions, not in the deeper human meanings of good and bad.

Pain is one of the evils of life; it would be monstrous to say that a world of wide-spread pain would be preferable, other things being equal, to a world without pain. Yet pain is not evil *per se;* and in so far as pain guides behavior successfully, it is not wholly bad. Pleasure likewise is good, but not good *per se,* and in so far as it diverts life from its immanent purpose it is to that extent bad.

Man exhibits a practically infinite depth of *immanente finalité.* Men are, in a limited sense, ends in themselves. In so far as man is a purely natural being, pleasure and pain might be thought to be his essential good and evil. But Siwek follows the Thomistic doctrine in urging that even in the world of nature perfection of type, rather than pleasure, is the goal of natural life processes. Man's goal is not

the same as the goal of a horse, for man stands at the top of a hierarchy of sentient beings and is subject to immanent demands for a type of perfection that no other creature knows. Not to achieve human perfection, failure to embody his ideal type, is genuine evil for man. Apart from the possibility of perfection of specific kinds, neither good nor evil have any objective meaning.

So much for temporal being. Man as ideal being, as child of God, has an immortal destiny. "God in his infinite perfection contains all Good, and He also sets the limits for the good of man." Man can grasp God's nature, and hence his own true good, by reason, but only imperfectly. To understand his true potential being and to attain it, man needs God's grace, not to frustrate man's true nature, as the dualists have mistakenly held, but to reach the true goal of his natural tendencies. Man's apparent tendency toward evil is not a positive drive; it is a weakness, an inability to hold to his true goal. Man's natural tendencies find their culmination in "an incoercible aspiration proceeding from the Author of all things". *"C'est Dieu qui sans cesse incite l'homme à la poursuite d'un ideal de perfection."*

Siwek thus rejects Pauline-Augustinian-Calvinistic dualism. Evil, however, remains a mystery; for, while it is not positive, it is *un loi—i.e.,* a universal necessity. Since life is always characterized by *immanente finalité,* and since life always fails to attain its potentiality, it always suffers from its failure. Evil is thus coterminous with life. Life, being free (freedom varying with the level of life), attains some good, but chooses some lesser ends, and, in consequenc, suffers deprivation. Also, individual lives are caught in the great web of failure and suffer from the acts of others. Suffering partially redeems life by turning it toward attainment of its true being. Man, destined for infinite good, is capable of the greatest perversion, and hence is subject to the sharpest suffering and the most profound sorrow. This suffering, rightly apprehended, is "the gift of God, the gift of Love".

CHARLES F. SAWHILL VIRTUE

THE UNIVERSITY OF LOUISVILLE

Verifiability of Value. By RAY LEPLEY. New York, Columbia University Press, 1944. Pp. ix, 277.

While the title of Mr. Lepley's book would suggest concentration on a limited, though important and critical problem, actually the book is a study of the general theory of value, in the most inclusive sense. And unless I have grievously misunderstood Mr. Lepley, his thesis is novel and truly revolutionary in character. To be sure, its general orientation is towards pragmatism, and its main inspiration John Dewey, but it appears to go much further away from traditional

points of view, for the thesis is none other than the complete breakdown of the distinction between fact and value, normative statement and descriptive statement. It is very interesting and instructive to follow the line of thought by means of which the establishment of this thesis is attempted. I find it more convenient to begin with the argument regarding the distinction between fact and value, although that is not the order of Mr. Lepley's treatment.

The first step in destroying this distinction is to try to show, following the usual argument of the pragmatist, that there is no difference between intrinsic and extrinsic values. Every desire, every so-called imperative, must take consequences into account, not only because there are other desires to be considered, but because the consequences of acting according to a desire modify the desire itself (41). To ignore consequences in favor of any absolute value is tantamount to fanaticism or asceticism. This argument is held to be valid both against any alleged absolute value, or scale of values, whether defined in terms of some Urbanesque 'ought to be' or in terms of the object or the fulfilment of desire. It seems to be inferred from this line of thought that all values are relative and contributory.

The next step is to try to show that value is independent of desire, whether as object of desire—as what we want or ought to want—or as a desired satisfaction of desire. Anything that contributes to the satisfaction of desire in any way at all is a value, whether we take satisfaction in it or not, and whether we know of it or not. Vitamins, only recently discovered, were values all the time they were unknown and unsought, and are no more valuable now that everyone is interested in them and seeking for them (200). Hence the whole physical universe, since it is the background of all our efforts and satisfactions, is valuable. And if every fact is a value, it is not necessary for it to contribute directly to elementary satisfaction or moral good: it is a value if it contributes to the being of any other fact. Anything is a value if it is merely efficacious. Thus causal efficacy and value appear to be identified (215).

In order to show that there is no distinction between normative and descriptive statements, Mr. Lepley attempts to transpose typical normative statements into equivalent descriptive statements, and vice versa. Thus "Water is H_2O" becomes "For this scientific purpose H_2O is a good (or the best or the right) formulation of what water is" (217). Similarly the valuative statement "Water is good to drink" may be expressed in factual terms "Under some circumstances organisms like to drink water" or "When water is assimilated in certain proportions and under certain circumstances, it contributes to certain specific and general organic processes essential to the health and growth of single cells and tissues and the maintenance of life", with

variants to much the same effect. And if it be objected that H_2O refers to existences which are independent of the purposes of man, scientific or other, Mr. Lepley (218) replies that water is or has the properties it is or has only in relation to certain purposes or interests of experiencing subjects.

He even goes so far as to claim that the scientific, moral and aesthetic modes of statement are essentially equivalent, their differences being but superficial owing to differences of emphasis or attention (222). He illustrates as follows:—The scientific statement, "Water is H_2O" can be translated into aesthetic language without loss or addition of essential meaning as "For harmony of terms and referents, and for harmony among the various terms in this given system of chemical signs and their meanings, water is properly expressed as H_2O". The statement can be translated into moral terms as "One who would express correctly in this sign system the chemical constituency of water must (or ought to) say that it is H_2O". Similarly (223) the aesthetic expression "This is a beautiful sunset" may be translated into scientific language as "This or these person(s) are receiving or having such and such perceptual-affective—conceptual experiences in this given situation", and into moral terms "Anyone who is having these particular experiences should say, if he is to be honest in his statement, that this is or is experienced as, a beautiful sunset". And a moral statement such as "Promises ought (generally) to be kept", may be stated in scientific signs as, "The keeping of promises produces effects which upon careful and continued examination of consequences are felt (by those who make this judgment) to be very important"; and into aesthetic terms, "For harmonious and satisfactory social relations, it is necessary that promises be kept".

Much as I admire the ingenuity and general consistency of Mr. Lepley's argument, I do not find it at all convincing. In his attempted proof that there is no essential difference between facts and values, the very first step is, I believe, in error—the discarding of the distinction between what have commonly been called extrinsic and intrinsic values. Both Mr. Dewey and Mr. Lepley have rightly called attention to the influence of consequences in transforming desire itself, so that at least no first order desires, as I would call them, can be taken as absolute, in the way, for example, Mr. R. B. Perry seems to take them. Yet that there are high order desires, or at the very least some one such desire, that can never become a means to other values, appears to me indubitable. Mr. Lepley seems to admit this for the values (or are they one value with different names?) he calls "total adjustment" (156), "wholesome and integrative personality" and "harmonious social relations" (140). But even elementary desires,

however much they may be modified by consequences, becoming perhaps less intensely held or less arduously pursued, nevertheless always keep some of their intrinsicality, so that no satisfaction becomes wholly bad, on reflection, but only relatively so. Nor can I convince myself that Mr. Lepley is himself convinced by the passage quoted from Dewey and Tufts's *Ethics* that there is no scale of values. The fact that there is, as they say (206), a time and a place for everything, does not carry the implication that, in its time and place, the higher is not superior to the lower. Beauty, for example, remains superior, in its time and place, to mere sensual satisfaction, in its time and place. The same holds true when higher and lower are viewed in relation to consequences. Many a non-Nazi German Gentile abandoned Jewish friends for fear of consequences to himself and his family, but with regret, that is to say, without losing the intuition of the high value of loyalty—so much higher than the value of eating cream, also abandoned for fear of the consequences of buying it in the black market, but without too much regret! The consequences must be very dire in order to dim the considered worth of high values, whereas lower values are readily relinquished because of small untoward results—as one may give up eating chocolate candy by reason of slight functional indigestion.

If now the difference between intrinsic and so-called extrinsic values holds, the second step which Mr. Lepley takes, leading him to attribute value to everything in the universe, independent of desire, fails. For whereas one would be justified in saying that vitamins are values in the sense of extrinsic values, even when unknown and undesired, one could not say that they were intrinsic values, until they became the objects of knowledge and desire, on being known and desired. Only an 'idealist' (such as myself) for whom every existent is a monad, could properly say that everything had (or was) intrinsic value—as being itself a wish or system of wishes, in process of fulfilment or frustration, since intrinsic value is just that. But Mr. Lepley does not himself embrace this view.

As for the transposability of descriptive and normative statements, it is my belief that Mr. Lepley commits the elementary error of inferring that because for every normative statement, there may be constructed a closely related valid descriptive statement, the two are essentially the same. The error is, I think, similar to that of confusing equivalent statements (statements such that if either is true the other is true) with identical statements. To prove this, it will be necessary to examine only one of Mr. Lepley's examples, for the same considerations hold for all. Take (1) "Water is H_2O" and compare it with Mr. Lepley's corresponding valuative statement (2) "For this scientific purpose, H_2O is a good (or the best or the

right) formulation of what water is". In the first place, H_2O in (1) is not the same as H_2O in (2), for the first refers to things, the latter to a formula; for another, (2) contains the concept, 'purpose', while (1) does not; for a third, (1) is a simple categorical statement while (2) is hypothetical, being really of the form, "If one has this scientific purpose, then etc." The possibility of constructing a closely related descriptive statement for every normative statement is very important, and Mr. Lepley deserves all praise for his recognition of this fact, but the recognition of the essential difference between the two is of equal importance for any adequate theory of value.

The impossibility of transposing ethical and aesthetic expressions into descriptive ones is shown by a close examination of Mr. Lepley's own examples. Take, for instance, "Promises ought (generally) to be kept". This he translates into 'scientific' terms as follows: "The keeping of promises produces effects which upon careful and continued examination of consequences are felt (by those who make this judgment) to be very important". But clearly anyone who says "Promises ought to be kept" says nothing of the kind. He is not saying that it is true that he, or anyone else who says the same thing, has certain feelings (that such feelings exist); that is, he is not stating a *proposition about* his feelings, which the hearers would be interested in verifying,; he is *expressing* his feelings, in order to win the sympathy and to excite the appropriate action of, his auditors. So, when the corporal says "March", he is not declaring "it is true that I desire you to march", but uttering his desire. It is never in question whether or not he desires his men to march, and they obviously do not regard his statement as something to be verified, but as something to be sympathized with (understood) and then acted on appropriately. In fine, it is a volitional expression, not a proposition—an utterance of feeling, not a proposition about feeling.[1]

It is, however, true that closely corresponding to every volitional expression there is a propositional expression, stating that such and such desires (volitions, feelings) exist; yet the two are distinct.[2] Moreover, most volitional expressions (music is one exception) contain a subordinate propositional statement, and this fact may be one reason for the identification of the two whole statements, which nevertheless remain distinct. For example, the volitional statement (command) "March"! may be correctly restated "I wish *that you*

[1] This distinction was—I hardly need to recall—stated by Aristotle, *De Interpretatione*, 4, 17a, 1-5. Compare the discussion of the issues raised in the above paragraph by G. E. Moore in *The Philosophy of G. E. Moore*, The Library of Living Philosophers, IV 535-554; and the article by Charles L. Stevenson in the same volume, 69-91.

[2] I myself did not clearly state this distinction in my discussion of value judgments in *Human Values* Appendix 1, 412-415, while insisting on the correlation of the two types of expression.

shall march", where the phrase underlined is a proposition, which will be verified when the men do march, or refuted if the men should refuse to obey orders. Similarly the expression, "I want to eat", says "I want *that I shall eat*", which also has its subordinate propositional clause.[3] It is interesting to notice, however, that whereas the descriptive proposition corresponding to the whole volitional expression—for example, "It is true that I have the wish that you shall march"—asserts the existence of something in the present, the subordinate proposition within the whole volitional expression—that you shall march—asserts something about the future, which can be verified or refuted only in the future.

Because Mr. Lepley neglects the distinction between normative and propositional statements, and between extrinsic and intrinsic values, I feel that he is not in a position to enlighten us very much about the verification of values. Significantly, the examples he analyzes of the verification of values are in the extrinsic field (Chapter III). That in some genuine sense there is a verification of intrinsic values also, and that in an equally genuine sense they are experimental, is certainly true. Yet the distinction between the two fields carries with it distinctions in the kind of experiment and verification possible, as Urban has argued.[4] Let me add that in my opinion the critical problems of our culture relate to intrinsic values, and that these are not touched by the ordinary scientific method—our scientific-mechanically minded optimists notwithstanding. Nevertheless, although I find myself in fundamental disagreement with Mr. Lepley, I regard his book as an important contribution, which every serious student of the theory of value should read and meditate upon.

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Paideia. The Ideals of Greek Culture. Vols. II and III. By WERNER JAEGER. Translated by GILBERT HIGHET. New York, Oxford University Press, 1943; 1944. Pp. xviii, 442; viii, 374.

These two volumes contain the third and fourth Books of *Paideia*, dealing with the fourth century B.C. down to Chaeronea, a period which, according to Professor Jaeger, has its real life precisely "in the bitter but magnificently enthusiastic struggle to determine the nature of true paideia" (II 9), and the first period in which paideia was carried on by prose instead of verse. It was an era in which "the spirit [= *Geist?*] was dangerously separated from society, and suffered the fatal loss of its function as a constructive force within

[3] See my *Human Values* 409.

[4] "Value Propositions and Verifiability", in *Journal of Philosophy* XXXIV (1937) 589-602.

the community. That loss always occurs when poetry ceases to be the medium for intellectual creative work, and for the definitive utterances of life; and when it gives way to more strictly rational forms" (II 10).

Book Three, "In Search of the Divine Centre", deals with the memory of Socrates, Plato's smaller Socratic dialogues, and *Protagoras, Gorgias, Meno, Symposium, Republic.* Book Four, "The Conflict of Cultural Ideals in the Age of Plato", deals with Greek medicine as paideia, especially the essays *On Ancient Medicine* and *On Diet;* with the paideia of Isocrates as found in *Against the Sophists, Panegyricus,* the three Cyprian speeches, *Areopagiticus, Antidosis;* with Xenophon's *Cyropaedia, Lacedaemonian Constitution, Oeconomicus,* and *Cynegeticus;* with Plato's *Phaedrus,* his relations to Dionysius, and his *Laws;* and with Demosthenes.

I will mention some of the more notable opinions expressed. To get at the essence of Socrates' paideia Professor Jaeger uses both Plato and Xenophon, but rejects Aristotle. Socrates was the Solon of the moral world. "For the second time in Greek history it was the Attic spirit which summoned the centripetal forces of the Greek soul to combat the centrifugal—by setting up a firm moral order to counterbalance that creation of Ionian thought, the philosophical cosmos of warring natural forces. Solon had discovered the natural laws of the social and political community. Socrates now explored the moral cosmos in the human soul" (II 28).

Professor Jaeger holds that there was no *involuntary* development of Plato's thought during his writing, at any rate down to the *Republic.* From the beginning Plato's purpose was political, the aim of politics was paideia, and the theory of Ideas was in his mind as essential to paideia. There is, however, a *voluntary* development in that the smaller Socratic dialogues conceal the political purpose and do not insist on the Ideas. "As [Plato] moved from the *Apology* to *Gorgias* and from *Gorgias* to *The Republic,* he must have had in mind the plan of taking his readers step by step upwards to the pinnacle from which they could look out to all the horizons of his thought" (II 105).

It was not Plato's own view, when he wrote *Protagoras,* that the good is pleasure. He is "trying to prove to the sophists that, *even if* he assumes that the vulgar are correct in thinking that what is pleasant is always good, his thesis (so difficult for common sense to accept) that knowledge is essential for right conduct can be proved with perfect ease" (II 142). *Gorgias* is a necessary complement to *Protagoras,* written at the same time. Contrasting paideia with power, it "develops Plato's conclusive view that the problem at the root of

all education is to find, to define, and to understand the standard by which it is to be regulated" (II 154).

The *Republic* is first and foremost a treatise on education, which "in Plato's day was the centre of all spiritual life and the source of all the deepest significance of human existence" (II 200). Hence, for example, the lack of constitutional guarantees against arbitrary use of the power of the rulers in Plato's ideal city. "It would be wrong to criticize the 'lack of guarantees' in the Republic exclusively from the standpoint of constitutional law and political experience, and to blame Plato for naïvely imagining that a state could be ruled without the complicated apparatus of a modern constitution. It seems perfectly clear that Plato had no intention of treating the problem seriously—because he was not interested in the state as a technical or psychological problem, but was regarding it merely as a frame and a background for education. We may reproach him for this, accusing him of deifying education; but the fact remains that his real problem was paideia. Paideia was for him the solution of all insoluble questions. It is not for any political reason that he crowds the greatest possible power into the hands of those who dislike it most. His rulers are the noblest products of education, and their duty is to be the noblest educators" (II 236).

The Idea of Good is identical with God. How else could Plato call it the happiest thing in the universe (*Republic* 526E)? It is identical also with virtue in itself (II 103), with Beauty itself (II 194), with the "first beloved" of *Lysis* (II 175), and with the One (III 352). "Plato's pupils believed that when he proclaimed the Good to be the ultimate cause of everything in the universe, he was founding a new religion. This is made quite certain by Aristotle's laudatory poem on the altar of Philia" (II 297). (In my translation of this poem in Professor Jaeger's *Aristotle*, p. 107, I should have written "*that* (not *how*) a man becomes good and happy at the same time".)

Professor Jaeger holds that both Socrates and Plato were strongly influenced by medical thought. Socrates' "sober determination to examine the *facts* of human life" (II 32) and his inductive method were learned from medicine, the only discipline in the ancient world which insisted on "the principle that experience is the basis of all exact knowledge of reality" (II 33). His "care of the soul" was an analogy from medicine. Plato's words *eidos* and *idea* were taken from medicine (II 103). "It is medical thought that enables Plato to understand the causes for the transformations that take place in human character" (II 333), and Professor Jaeger brings out all the medical thinking in Plato's account of the decline of constitutions and men. "When Plato was establishing his science of ethics and politics, he

modelled it neither on the mathematical type of knowledge, nor on speculative natural philosophy, but on . . . medical science" (III 21). I think Professor Jaeger implies that the *Phaedrus* means that Hippocrates was aware of the method of division. "The reason why medicine rose to such a representative position in Greek culture was that it revealed, clearly and impressively, in the sphere most accessible by immediate experience, the inalienable significance of this fundamental Greek ideal [of equality and harmony]. In this higher sense, we may say that the Greek ideal of culture was the ideal of Health" (III 45).

Isocrates' *Against the Sophists* is an attack on Plato among others, largely in reply to Plato's *Gorgias*. (The contradictory view is a relic of the time when Plato's *Phaedrus*, which sincerely praises Isocrates, was thought to be an early work.) But Isocrates, like most readers of Plato's early dialogues, overlooked their political content. However, he very soon afterwards understood them better, for as early as the eighties his *Helen* recognizes that Plato's cultural ideal had political implications. Only he felt that it defeated itself by its concentration on individual morality and on dialectical quibbles (III 69). Isocrates was largely influenced by Thucydides, and Professor Jaeger seems to be justifying the inclusion of Thucydides in the first volume of *Paideia* when he writes that, though Thucydides himself did not put his new type of objective political thought to any practical use, "we treated it . . . as . . . potentially an important factor in the paideia of the future . . . and now in the paideia of Isocrates . . . this mighty new intellectual instrument is fully employed for the first time" (III 101, cf. the review of *Paideia* I in this REVIEW XLIV 394). To this he appends a very interesting short discussion of the place of history in Greek paideia: "Just as the educational value of mathematics is fully recognized only in *philosophical* culture, so the new educational force of historical science, revealed by Thucydides, really finds its true place within the *rhetorical* system of education" (III 102, my italics).

The *Areopagiticus* was composed before the outbreak of the Social war. It is a call for more and better state control of paideia to enable Athens to maintain her leadership, and must have been spoken in the name of a real political party. Isocrates' justification of himself in *Antidosis* must be compared with that very personal document, Plato's seventh Letter. "It is certainly an important sign of the times that two such men should end by taking the public into their confidence about their personal aspirations and defeats" (III 212).

Such are some of the theses in these two volumes; but no selection of these could give any adequate idea of the character and value of the work. It is not an argument for some novel proposition. It is a

presentation, an *Anschauung*, a revitalization, of a rich vein of ancient thought and aspiration. It is crammed with happy thoughts, epigrams, illuminating comparisons. It is universal and whole, combining philology, philosophy, rhetoric, history, in a single living thing, the opposite of suspicious departmental specialization. Professor Jaeger has a vast store of reading present in his mind, but it does not break or confuse his purpose. He is very sympathetic to every writer he interprets. (Not until he has passed from Isocrates to another man does he allow himself to say that Isocrates once made "an unforgivable political blunder" (III 282).) The sympathy seems excessive in the case of Demosthenes. If Demosthenes was what Professor Jaeger himself says he was, one does not see justification for the tone of high partisanship. In fact, one hardly sees justification for including Demosthenes at all in the history of paideia. "Demosthenes' efforts to re-educate the Athenian people", yes (II 7), but surely they were not education in the high sense of paideia. Professor Jaeger's reason for including Demosthenes seems to be that paideia is the creation of great character, and the character of the statesman is great, and Demosthenes is a stage in "the development of the ideal of the statesman's character" (III 280). But one certainly wishes that the volume had ended with some other man, or with a general retrospect.

Men fertile of insights and ideas, as Professor Jaeger is in a wonderful degree, sometimes annoy the dry critic and the cold scholar; and the defects of Professor Jaeger's genius are here to annoy them as formerly. It is a pity that he claims absolute certainty for so many of his interesting suggestions. "The conclusion is inevitable that—" (II 54). "Quite clearly" (II 117). The lay reader will be wise to take such phrases as warnings that the following proposition is less probable than most of the propositions in the book. It is a pity that Professor Jaeger's language is sometimes liable to make the reader assume that an ancient author used words he did not use. It is perhaps legitimate to talk of *arrhéton* when Plato says ῥητὸν γὰρ οὐδαμῶς (III 208); but it is surely overstepping to talk of *mystagogia* when the passage has no cognate word at all (*ibidem*). Those who have not studied Isocrates may get the impression that he mentioned Plato by name. And it can hardly be right to infer from the same sentence in Isocrates' *Philip* 12 both of these interpretations: (1) "Isocrates replies by deriding the plans of people who wrote Republics and Laws as utterly utopian" (III 343); (2) "He . . . treats [Plato] as a very great political theorist, whose theories could unfortunately never be put into practice" (III 67).

Professor Jaeger encourages the error, which democratic philosophers are predisposed to believe, that Plato suggested universal education in the modern sense. "Plato's ideal of a general education for

the masses" (III 245, same meaning 244 and 253). The reference which he gives to the *Laws* for "universal education" means *compulsory* rather than universal education. It was to be compulsory for all citizens, male or female. Foreigners and slaves are not included; Professor Jaeger implies this in one sentence, but that will not undo the false impression. The statement that "Phaleas' ideal state involved equal education for all citizens" (II 201) is supported only by a reference to Aristotle's *Politics* 1266b29-33. This passage, however, if it implies anything about Phaleas on equal education for all citizens, implies that he never mentioned the idea. He recommended equal *property* for all, and Aristotle muses that what we need is not equal property but equal education.

The first volume of *Paideia* appeared in the original German as well as in English. But the second and third appear in English alone. Events have suppressed Professor Jaeger's fine German style, and a reviewer cannot assess the accuracy of Professor Highet's translation. He can say, however, that it is a good piece of English, with a large vocabulary and a spicing of echoes, such as: "Intoxicated by the exuberance of her own verbosity, [Athens] had in the briefest of moments talked all traditional values out of existence" (II 28). (Disraeli said "inebriated", but the conventional misquotation which Professor Highet follows is an improvement of the sound.) Only occasionally does one feel a desire to see what the German was.

The Oxford University Press has, to my taste, made better books of these two volumes than of the first. The upright Greek face is a great improvement on the sloping. It still, however, has that tendency to rise above the alignment of the surrounding Roman face. In the text the Greek is not quite as black as the Roman; but in the smaller face of the notes the balance is just right. The jackets have fine Greek designs which were selected, Professor Jaeger says, with the expert help of Dr. Herbert Bloch.

What message has Greek paideia for our time? As its full meaning takes shape at Professor Jaeger's evocation, the reader seems to become aware of two strong reasons why the effect of Greek paideia upon this age must be small. The first is modern equalitarianism, miscalled "democracy", the doctrine of innate perfection. "I am as good as anybody—*already*—by *birth*." What then can we want with paideia? Education is not the refining of human nature, as paideia assumes, but the giving of advantages. "Democrats", that is, equalitarians, have an ideal man, but deep in their hearts they think there is no process for producing him, for, if there were, it would be an "aristocratic", that is, inequalitarian, process. It would admit that some men are better than others, and that there are processes which can increase the disparity. But this is a truism which the equalitarian

forgets whenever he can. He rejects all training of the character to a non-utilitarian ideal.

The other factor strongly limiting the appeal of paideia to our time is that paideia puts the emphasis on virtue but the present world puts it on happiness. The supreme value in human character is no longer virtue but happiness. We have lost interest in virtue as we have lost interest in sin. Instead of straining ourselves and others toward virtue by exhortation and laborious training, we are (or think we are) easing ourselves and others into happiness by the sure and painless scientific method. Seven hours a day of steadily collecting data and running tests, then home to perfect relaxation, and all the while the means of happiness are steadily accumulating. The ideal of paideia has fallen with the rise of scientific method. Nowadays you do not have to strain for things; you have a method which leads you to them steadily and easily. And you do not have to seek the good in the cultivation of yourself, because you can alter the external world. Nowadays we do not ask what is the best type of man, but what type we need (for practical purposes). We want specialists, not good men. If briefly aroused to something lacking in our characters, we angrily demand some crude remedy such as more American history in the schools, and soon return to our ruling attitude. The ancient world, we think, missed the true aim. Those who wanted to alter others made the mistake of wanting to make them virtuous, not happy; and the one school that held happiness to be the end, the Epicureans, made the mistake of not trying to alter men, or not seeing that vast practical measures could be taken to make men happier.

Perhaps Professor Jaeger will discuss this problem in his next volume, when he comes to "the relation between culture and science"; for he proposes another volume of *Paideia* concerning the Hellenistic age. "Aristotle will be discussed with Theophrastus, Menander, and Epicurus . . . Like Socrates, he is a figure who marks the transition between two epochs. And yet, with Aristotle, the Master of those who know, the conception of paideia undergoes a remarkable decrease in intensity, which makes it difficult to set him beside Plato, the true philosopher of paideia. The problems involved in the relation between culture and science, which are characteristic of Hellenistic Alexandria, first come out clearly in the school of Aristotle" (II xi).

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Planetary Democracy. An Introduction to Scientific Humanism and Applied Semantics. By OLIVER L. REISER and BLODWIN DAVIES. New York, Creative Age Press, Inc., 1944. Pp. xiii, 242.

The authors of this book have sought to integrate two fashionable

modern theories; the nominalistic conception of the theory of meaning (which the logical positivists prefer to call semantics) and the political plan for a worldwide democracy, which they strangely label planetary democracy. All fields, of course, are related in some way; but in this case the authors fail to make the connection logically, although most of the work is devoted to the task. They seem not to understand the difficulties confronting their undertaking. Presumably all men of good will would like to see a global democracy established; but all men of good will would not agree with the interpretation accorded to the theory of meaning by the logical positivists. The authors do not seem to know that long before "semantics" there was such a study as speculative rhetoric and that even now there are interpretations of the theory of meaning made by metaphysical realists. Perhaps a global democracy might prove more consistent with a realistic interpretation of the theory of meaning. It is possible to hope so, at any rate; for after being lectured at some length on the contribution which semantics can make to political theory by increasing the efficiency of definition, we are told that the authors use the term, democracy, in an unusual manner and that they intend by it "more than a political concept: it represents a fusion of all our thoughts and actions—scientific, social, religious, and economic—into one supreme effort and program" (159). In other words, the scientific application of semantics to the political conception of democracy consists in enlarging the meaning of the word to the point where it includes all social activity and very nearly all human activity, a rather dubious gain so far as the kind of precision and accuracy which we have come to expect from science is concerned.

Neither semantics nor world democracy is advanced by the authors of this book. And since in their hands these topics are not properly fused, either, it is difficult to determine just what the contribution actually is.

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The Philosophy of American Democracy. Edited by CHARNER M. PERRY. Chicago, The University of Chicago Press, 1943. Pp. xvii, 153.

This book, with its somewhat imposing title, consists in fact of five not very closely related lectures delivered in 1942 at the University of Chicago on the Walgreen Foundation for the Study of American Institutions. Two of the lectures, the first and the last, were delivered by Professor T. V. Smith. They deal respectively with Thomas Paine and Justice O. W. Holmes and contrast the revolutionist and the evolutionist in politics, the man of ideas who stimulates and the man who compromises and conserves. The second lecture, by Dean Clarence H.

Faust, analyses the debate, especially that contained in the pamphlet literature, over the adoption of the Federal Constitution. The third and fourth lectures are by Professor Frank Knight and bear the titles, "The Meaning of Freedom" and "The Ideal of Freedom". They contain an elaborate analysis of the meaning of the word, which is used chiefly to show that ideals which now have an emotional warmth, like the Four Freedoms, are mostly "romantic" illusions, and while this is said not to justify contentment with the *status quo*, just what it does justify fails to appear. The keynote of the book occurs at the end of Professor Knight's second lecture: "The first requirement, not yet achieved or in sight, if freedom is to be increased and life ennobled, is the creation, presumably by general education, of a disposition to attack the problems 'rationally', in terms (a) of the facts of the situation and the possibilities of action and (b) reasonable clarity and agreement on the ideals to be achieved" (118). On this showing perhaps Professor Smith's revolutionists hardly "belong". The most appealing thing about the book is its unrepentent academicism, at a time when the prophets were telling us that what democracy needed was a new "faith".

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The following books have been received:

Science and the Idea of God. By WILLIAM ERNEST HOCKING. Chapel Hill, The University of North Carolina Press, 1944. Pp. xii, 124.

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Aristotle's Criticism of Plato and the Academy. By HAROLD CHERNISS. Baltimore, The Johns Hopkins Press, 1944. Pp. xxviii, 610.

Kierkegaard's Attack Upon "Christendom", 1854-1855. Translated, with an Introduction, by WALTER LOWRIE. Princeton, New Jersey, Princeton University Press, 1944. Pp. xviii, 303.

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Charles Péguy: *Men and Saints.* Prose and Poetry. Rendered into English by ANNE and JULIAN GREEN. New York 12, Pantheon Books Inc., 1944. Pp. 303.

Philosophy—East and West. Edited by CHARLES A. MOORE. Princeton, Princeton University Press, 1944. Pp. 334.

New Perspectives on Peace. Edited by GEORGE B. DE HUSZAR. Chicago, University of Chicago Press, 1944. Pp. viii, 261.

Godmanhood as the Main Idea of the Philosophy of Vladimir Solovyev. By PETER P. ZOUBOFF. New York 11, International University Press, Inc. (Distributor), 1944. Pp. 233.

An Essay on Man. An Introduction to a Philosophy of Human Culture. By ERNST CASSIRER. New Haven, Yale University Press, 1944. Pp. xii, 237.

John Amos Comenius: *The Angel of Peace.* Edited by MILOS SAFRANEK. Introduction by MATTHEW SPINKA. New York 12, Pantheon Books, 1944. Pp. 127.

The Conception of Substance in the Philosophy of the Ikhwan as-Safa' (*Brethren of Purity*). By EMIL L. FACKENHEIM. Reprinted from *Mediaeval Studies,* V, (Toronto 1943), pp. 115-122.

Annuario de filosofia. Del seminario de investigaciones filosoficas de la facultad de filosofia y letras. Fuerza me es vivir filosofando. Volumen I, año de 1943. San Cosme, Mexico, D.F., Universidad Nacional Autonoma de Mexico, n.d. Pp. 158.

NOTES

The seventh series of Carus Lectures are to be given by Professor C. I. Lewis of Harvard University. When accepting this responsibility Professor Lewis stated that his lectures would be selected portions of a study whose major thesis is that valuations are a form of empirical knowledge and which he proposes to develop in the form of three "Books" entitled "Meaning and the Analytic", "Empirical Knowledge" and "Valuation". The lectures are to be delivered at a time and on an occasion to be determined by the Board of Officers of the American Philosophical Association and publication by the Open Court Publishing Company is to follow shortly thereafter.

EDWARD L. SCHAUB
Chairman, Carus Lecture Committee

Professor Brand Blanshard of Swarthmore College has been appointed Professor of Philosophy at Yale University, beginning July, 1945.

Professor Arthur E. Murphy of the University of Illinois has been appointed Professor of Philosophy in The Sage School of Philosophy at Cornell University, beginning July, 1945.

It has been decided to delay publication of the PROCEEDINGS OF THE AMERICAN PHILOSOPHICAL ASSOCIATION until the July issue of the REVIEW, in order to include material which could not be gathered in time for publication, as usual, in the March issue.

The following is a list of articles in current philosophical periodicals:

MIND LIII 212: *C. Lewy,* On the Relation of some Empirical Propositions to their Evidence; *George E. Hughes,* Motive and Duty.

THE JOURNAL OF PHILOSOPHY XLI 19: *Cornelia LeBoutillier,* Moral Power; *Bertram Morris,* A Reply to Mr. Thurston's Discussion of *The Aesthetic Process; M. Whitcomb Hess,* Mr. Beck's "Judgments of Meaning in Art"; *Lewis White Beck,* Reply to Mrs. Hess; *M. Whitcomb Hess,* One Word More to Mr. Beck; *Lewis White Beck,* Remarks on Mrs. Hess's "One Word More". 20: *Roy Wood Sellars,* Is Naturalism Enough?; *Sidney Hook,* Is Physical Realism Sufficient?; *F. C. Dommeyer,* Comments on Professor Miller's Calendar Theory of Freedom. 21: *Arnold Isenberg,* Perception, Meaning, and the Subject-Matter of Art. 22: *Raphael Demos,* The State and the Law; *Harold R. Smart,* The Alleged Predicament of Logic. 23: *Yehuda Leahn Weinberg,* Dynamic and Static Aspects of Existence and their Signicance for the Problems of Method; *Joseph Katz,* On Chance and Prediction; *Farrand Sayre,* Emotive "Meanings" and Ethical Terms.

PHILOSOPHY AND PHENOMENOLOGICAL RESEARCH V 1: *Ernst Cassirer,* The Concept of Group and the Theory of Perception; *H. R. Smart,* What is Deduction?; A Symposium on Meaning and Truth, Part III: *Ernest Nagel,* Truth and Knowledge of the Truth; *Felix Kaufmann,* Concerning Mr. Nagel's Critical Comments; *Ernest Nagel,* Rejoinder to Mr. Kaufmann's Reply; *Charles A. Baylis,* Critical Comments on the "Symposium on Meaning and Truth"; *C. I. Lewis,* In Reply to Mr. Baylis; *Felix Kaufmann,* A Note on Mr. Baylis's Discussion; *Roy Wood Sellars,* The Meaning of

True and False; *A. Ushenko,* A Note on the Semantic Conception of Truth; *Louis O. Kattsoff,* Physics and Reality; *Kurt Riezler,* Comments on Kattsoff's "Physics and Reality"; *Louis O. Kattsoff,* In Reply to Mr. Riezler; *Maximilian Beck,* Existentialism.

SCIENCE & SOCIETY VIII 4: *Albert Deutsch,* American Labor and Social Work; *Leonard Newman,* Opposition to Lincoln in the Elections of 1864; *Frank E. Hartung,* The Sociology of Positivism; *Harry Slochower,* The Marxist Idea of Change and Law; *The Editors,* On Misunderstanding Soviet Political Economy; *T. Addis,* Query on Dialectic.

SOCIAL RESEARCH XI 3: *Alvin Johnson,* Hiram J. Halle—1867-1944; *Richard Schüller,* Great Britain's Trade Policy; *Fritz Sternberg,* The United States in the Future World Economy; *Alvin Johnson,* The Coming Peace Crisis; *Alexander H. Pekelis,* The Case for a Jurisprudence of Welfare—Possibilities and Limitations; *H. H. Gerth,* A Midwestern Sectarian Community; *E. Jay Howenstine, Jr.,* Why "Normalcy" Failed (Note); *Hans Neisser,* Comments on "Capital Is Made at Home".

THE ANTIOCH REVIEW IV 3: *Kermit Eby,* Politics for the Intellectual; *Freeman Champney,* Protofascism in American Literature; *Valdemar Carlson,* Bretton Woods and Wall Street; *Edgar E. Poulton,* The Development of "Backward" Areas; *S. Burns Weston,* The Caribbean: Laboratory for Colonial Policy; *Marjorie Ruth Clark,* Our Own Puerto Rico; *Charles A. Madison,* Brooks Adams: Jeremian Critic of Capitalism; *Eric M. Steel,* The French Writer Looks at America; *Sidney Alexander,* Prelude to Bolivar; *N. Philip Norman, M.D.,* and *James Rorty,* Our "Civilized" Food Habits; *Lewis Corey,* Postwar Problems: III. Boom and Bust?; *The Editors,* We Note; *Clark Foreman,* Statement of the National Citizens Political Action Committee.

THE PERSONALIST XXV 4: *The Editor,* The Animal Capable of Laughter; *John Wright Buckham,* The Larger Logic; *Wilbur Long,* War-Mindedness and Totalitarianism; *Wendell Thomas,* Personalism in Science and Democracy; *A. Campbell Garnett,* Religion and The Scientific Mind; *M. Whitcomb-Hess,* Mr. Adler and the Teacher in a Democracy; *Lulu Minerva Schultz,* Verse: This Living; *Joseph Remenyi,* Cleverness in Literature.

THOUGHT XIX 74: *Robert I. Gannon,* Action This Day; *Francis J. McGarrigle,* Freedom and the Campus; *Barry Byrne,* Eric Gill; *Friedrich Baerwald,* The Future of Europe; *Frederick Haussmann* and *D. Ahearn,* International Cartels and World Trade; *Eugene Bagger,* The Torment of France; *N. Elizabeth Monroe,* Freedom of the Novelist; *Guido Zernatto,* Religion and Nationality; *John E. Wise,* Formal Training and the Liberal Arts.

THE REVIEW OF POLITICS VI 4: *Jacques Maritain,* Poetic Experience; *Frank O'Malley,* The Evangelism of Georges Bernanos; *Otto Von Simson,* Rubens and Richelieu; *Matthew A. Fitzsimons,* Politics and Men of Learning in England 1540-1640; *Mario Einaudi,* Political Issues and Alignments in Italy Today; *Georgette Vignaux,* The Catholics of France from the Autumn of 1942 to the Invasion.

THE HIBBERT JOURNAL XLIII 1: *F. H. Heinemann,* The New Theory of Concerted Power; *Sydney H. Moore,* After Thirty Years of War; *H. D. Northfield,* The Travail of Creation; *R. C. Andrews,* A Nazi Prophet

and Philosopher; *Martin Jarrett-Kerr,* Confusion of Tongues in Current Scientific Discussion; *J. W. Poynter,* Plea for a New Rationalism; *Robert Sencourt,* What is Mysticism?; *G. W. Sheppard,* The Problem of Translating "God" into Chinese; *H. G. England,* The Godhood and Manhead of Jesus; *W. J. Ferar,* The Religion of the Village; *A. T. Welford,* Research Work in the Church—A Prospect; *S. H. Mellone,* Survey of Recent Philosophical and Theological Literature.

THE THOMIST VII 4: *Aurel Kolnai,* The Humantarian versus the Religious Attitude; *Stephen McCormack,* The Configuration of the Sacramental Character; *James F. Keleher,* The Search for the Intelligible Good; *Nicholas Halligan,* Patristic Schools in the Summa (Continued).

FRANCISCAN STUDIES XXV 3: *Raphael M. Huber,* St. Bernardine and His Times; *Harry B. Guttman,* Nicholas of Lyra and Michelangelo's Ancestors of Christ; *Marion A. Habig,* The Works of St. Bernardine; *Eric May,* The Friendships of St. Bernardine of Siena; *Achilles Merrsman,* The Franciscans of the Mother of God Province in Sumatra; *Mary R. Learned,* Saints' Lives Attributed to Nicholas Bozon.

JOURNAL OF THE HISTORY OF IDEAS V 4: *Clarence D. Thorpe,* Coleridge as Aesthetician and Critic; *G. G. Coulton,* The Historical Background of Maritain's Humanism; *William J. Grace,* Maritain and Modern Catholic Historical Scholarship; *Albert T. Lauterbach,* Militarism in the Western World; *Joseph C. Roucek,* A History of the Concept of Ideology.

THE JOURNAL OF RELIGION XXIV 4: *Bernard Eugene Meland,* Some Unresolved Issues in Theology; *Clarence Tucker Craig,* The Identification of Jesus with the Suffering Servant; *W. Norman Pittenger,* The Christian Philosophy of John Scotus Erigena; *Alexander Altmann,* Franz Rosenzweig and Eugen Rosenstock-Huessy: An Introduction to their "Letters on Judaism and Christianity"; *Douglas V. Steere,* Kierkegaard in English; *Winthrop S. Hudson,* Quaker History: Dr. Hudson Replies.

THE REVIEW OF RELIGION IX 1: *Paul Tillich,* Estrangement and Reconciliation in Modern Thought; *Dorothy Wilbyrna Smith,* "Whom the Gods Destroy"; *Joseph L. Blau,* "The Freeborn Mind": A Review Article; *Louis H. Gray,* Addenda et Corrigenda to "Brythonic Christianity"; *Jean Wahl,* Concerning Bergson's Relation to the Catholic Church.

ANGLICAN THEOLOGICAL REVIEW XXVI 4: *Richard Salomon,* Patriarch Nikon and the Russian Church; *John S. Marshall,* Philosophy Through Exegesis; *Mary E. Andrews,* The Super-Historical Gospel: F. C. Baur's Criticism of the Gospel of John; *W. Norman Pittenger,* Ralph Cudworth and the Cambridge Platonists; *Robert Leet Patterson,* The Theology of Channing and the *Via Affirmativa; Frederick Ward Kates,* Bishop Brent—the Man and His Books; *Charles W. F. Smith,* The Tradition and the Mission of the Church (Church Congress Syllabus 8: "The Anglican Tradition," Part VI); *William H. P. Hatch,* A Note on Matthew 20:15; *Charles C. Torrey,* "Two Sons" in Acts 19:14.

THE HARVARD THEOLOGICAL REVIEW XXXVII 3: *H. I. Bell,* Evidences of Christianity in Egypt During the Roman Period; *Herbert C. Youtie,* Sambathis; *Peter Oliver,* "Probationers for Eternity." Notes on Religion in the United States in the Year 1800.

SPECULUM XIX 4: *Edouard Sandoz,* Tourneys in the Arthurian Tradition;

William W. Heist, Welsh Prose Versions of the Fifteen Signs Before Doomsday; *Gardiner Stillwell,* The Political Meaning of Chaucer's *Tale of Melibee; B. Wilkinson,* The Coronation Oath of Edward II and the Statute of York; *Arthur Layton Funk,* Robert le Coq and Etienne Marcel; *A. H. Schutz,* The Provencal Expression *Pretz E Valor; Robert S. Smith,* Fourteeth-Century Population Records of Catalonia.

THE BRITISH JOURNAL OF PSYCHOLOGY XXXV Part I: *John Orr,* On some sound values in English; *Margaret A. Mellone,* A factorial study of picture tests for young children; *Samuel F. Klugman,* Memory for position, among children, as measured by serial reproduction; Proceedings of the British Psychological Society, 1943.

THE AMERICAN JOURNAL OF PSYCHOLOGY LVII 4: *G. A. Miller* and *W. R. Garner,* Effect of Random Presentation on the Psychometric Function: Implications for a Quantal Theory of Discrimination; *R. C. Travis,* Perception and Bodily Adjustment Under Changing Rotary Acceleration: A New Technique; *S. R. Heath, Jr.,* Clinical Significance of Motor Defect, with Military Implication; *W. N. Schoenfeld,* The Treatment of Multiple Entries in Analysis of Variance with Three Criteria of Classification; *S. Feldman,* Criteria of Historical Development; *H. G. Johnson,* An Empirical Study of the Influence of Errors of Measurement Upon Correlation; *R. S. Uhrbrock,* Evidence From Literate Tastes and Preferences Upon the Interests of Men Employed in Industry; Notes and Discussions.

PSYCHOLOGICAL REVIEW LI 5: *W. B. Pillsbury,* Joseph Jastrow: 1863-1944; *Ivan D. London,* Psychologists' Misuse of the Auxiliary Concepts of Physics and Mathematics; *Raymond S. Cattell,* Psychological Measurement: Normative, Ipsative, Interactive; *Isidor Chein,* The Awareness of Self and the Structure of the Ego; *Michael J. Zigler,* The Neurophysiology of Post-Contraction; *Kate Gordon Moore,* Eleanor Harris Rowland Wembridge: 1883-1944.

JOURNAL OF EXPERIMENTAL PSYCHOLOGY XXXIV 5: *I. A. Berg,* Development of Behavior: The Micturition Pattern in the Dog; *B. G. Rosenthal,* Hypnotic Recall of Material Learned Under Anxiety- and Non-Anxiety-Producing Conditions; *M. E. Thompson,* An Experimental Investigation of the Gradient of Reinforcement in Maze Learning; *H. J. Leavitt* and *H. Schlosberg,* The Retention of Verbal and of Motor Skills; *R. C. Travis,* A New Stabilometer for Measuring Dynamic Equilibrium in the Standing Position.

PSYCHOLOGICAL BULLETIN XLI 8: *Robert R. Sears* (ed.), Clinical Psychology in the Military Services. 9: *H. L. Ansbacher,* German Industrial Psychology in the Fifth Year of War; *Florence L. Goodenough,* Bibliographies in Child Development: 1931-1943; *Ralph H. Gundlach,* The Mechanism of Monocular Accommodation in Men; *Benbow F. Ritchie,* Hull's "Treatment of Learning"; *Various Authors,* Psychology and the War.